FLORIDA WILDLIFE

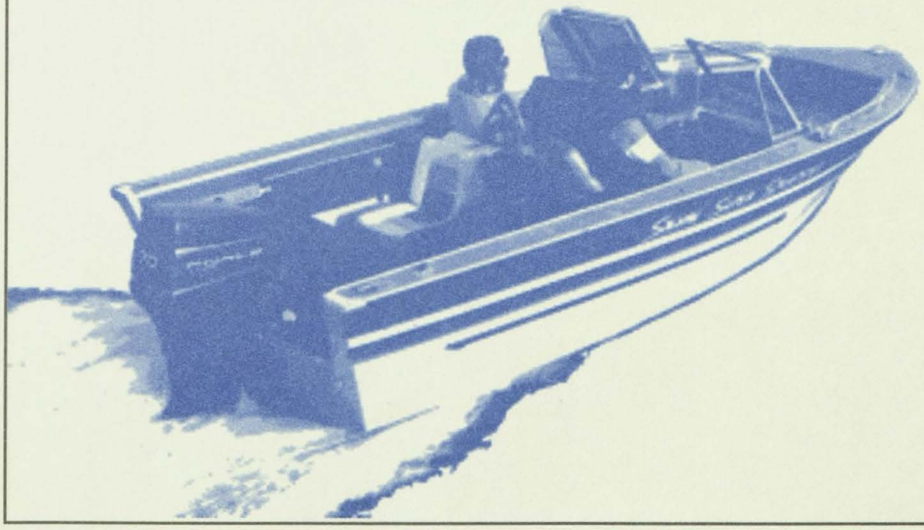
Volume 47, Number 4 July-August 1993

Boat Smart

Learn the Ropes Before You Launch

Nationwide, nearly 1,000 people will die in boating accidents this year. The majority will drown because they aren't wearing life jackets. Too many of the deaths will be alcohol-related. The U.S. Coast Guard estimates the number of non-fatal boating accidents to be 60,000 or higher, with property damage well over $240 million annually. Don't become a statistic. Here are some things you can do to prevent boating accidents.

- Buckle up – wear your life jacket. Make sure your jacket fits properly. Also keep throwable flotation devices and other emergency equipment on board and within reach.
- Alcohol and boating do not mix. It is illegal to operate a vessel while intoxicated Alcohol can impair your vision, balance and reaction time.
- Make a float plan. Tell someone where you plan to go and when you'll be back.
- Be aware of potential navigational hazards and the water conditions where you will be boating.
- Know how to handle the boat you are using.
- Check weather conditions and heed weather warnings.
- Observe navigation rules and courtesies of safe boating. It is your responsibility to know and follow local laws and ordinances regarding use of watercraft.
- Manage your fuel wisely. Use one-third of the fuel to go, one-third to get back and keep one-third in reserve.
- Attend a safe-boating class.



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SAFER BOATING THROUGH EDUCATION

FLORIDA WILDLIFE®

Volume 47, Number 4 July-August 1993

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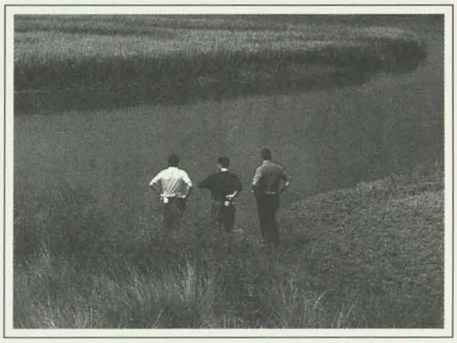
FLORIDA WILDLIFE (ISSN 0015-4369) is published bimonthly by the Florida Game and Fresh Water Fish Commission, 620 South Meridian Street, Tallahassee, Florida 32399-1600. Second-class postage paid at Tallahassee, Florida. Post Office Publication Number 202440. Materials in FLORIDA WILDLIFE include copyrighted materials that are property of individual contributors. Written permission to use the Publisher's materials will be granted by the editor for noncommercial, public informational purposes. Manuscripts, photographs and other submissions are received only with the understanding that the Publisher assumes no responsibility for any loss or damage. Contributors should request "How To Submit" before sending materials.

Subscription prices: $7 for one year (six issues); $14 for two years (12 issues); $20 for three years (18 issues). Add $4 per year for foreign mailings. Postmaster: Please send address changes to: FLORIDA WILDLIFE, Circulation Office, 620 South Meridian Street, Tallahassee, FL 32399-1600.



Wildlife Viewing
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Donald "Rusty" Rust's oil painting of a Florida panther is the winner of our 1993 cover art contest. See page 24 to find out how you can receive a print of this painting, and take a look at some of the other fine works entered, beginning on page 25.

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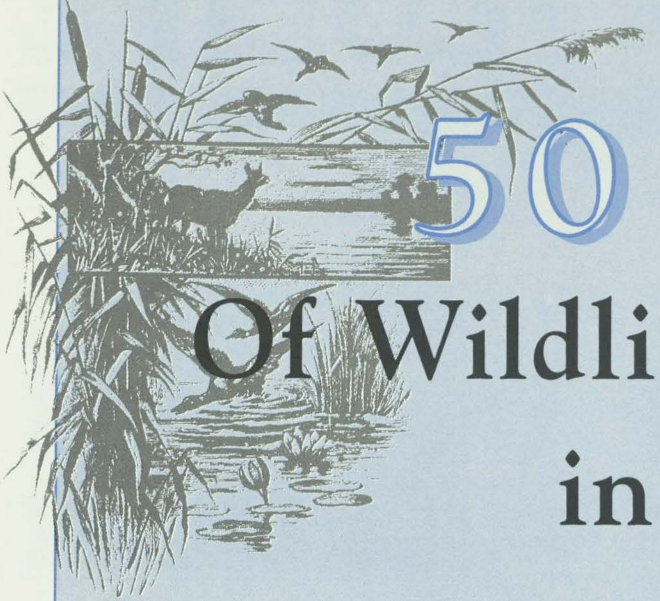


50 Years Of Wildlife Management in Florida

By Henry P. Cabbage

Although the concept of wildlife conservation was reflected in Florida's laws nearly two decades before statehood, it was 118 years later before science took a dominant role in the process.

In 1946, the three-year-old Game and Fresh Water Fish Commission employed its first wildlife biologist to study the effects of land use on quail. Today, 83 percent of the Division of Wildlife's 168½ positions are held by scientists and technicians.

During its early years, the division's role focused on game wildlife. Then, as the agency matured, it became increasingly evident that game management was ineffective if it didn't also include management of nongame wildlife. Officials found that practices directed at a single species inevitably affected other species as well. Even so, it was hunters and fishermen who funded the bulk of Florida's freshwater resource and wildlife management until the 1973 Legislature appropriated general revenue funds for the agency's overall programs.

Well-intended – but misguided – management practices of the previous centuries began to disappear by the late 1940s. Bounties on predators such as Florida panthers and diamondback rattlesnakes were abolished when wildlife managers learned such policies had little or no effect on game populations. In 1947, the Division of Game Management came into being and, with federal funds from the Pittman-Robertson Act for Wildlife Restoration, promptly purchased 50,000 acres of land in Palm Beach County. The tract, known as the J.W. Corbett Wildlife Management Area (WMA), was fenced and a basic program was created there to increase production of deer, turkey and quail for public hunting.

The following year, the Robinson Land and Lumber Co. of Alabama offered the Commission control of 110,000 acres in the Gulf Hammock region of Levy County in a 25-year lease. The Commission agreed to construct a fence around the area and provide law enforcement officers to patrol it. That was the first of many lease agreements between the agency and private landowners for the establishment and operation of wildlife management areas.

In this 50th anniversary year, the Commission now owns, leases or otherwise cooperates with landowners to offer a total of 80 Type I wildlife management areas and wildlife and environmental areas covering more than 4 million acres. In the Type II wildlife management area system, the agency cooperates with landowners to offer an additional 1.3 million acres. No other state offers as much public hunting land as Florida.

The Division of Game Management conducted a 1947-48 statewide deer and turkey survey, which revealed a wealth of habitat but small populations for both species – roughly 32,500 deer and 26,800 turkeys. Researchers found that some areas of prime turkey habitat had virtually no turkeys. Immediately after the survey, 270 wild-trapped Osceola turkeys (which occur only in the Florida peninsula) were released throughout Manatee, Sarasota, DeSoto and Hardee counties. These counties were closed to turkey hunting while the turkey population recovered from past losses. By 1955, the area again was opened to turkey hunting and has opened every year since. Pinellas County, also virtually turkeyless in 1950, underwent a successful restocking project and became the source of 75-100 turkeys relocated to other parts of the state in 1960.

By 1967, the state's pre-hunting season turkey population stood at about 80,000. Today it's nearly 100,000, including Osceola and intergrade Osceola/eastern turkeys.

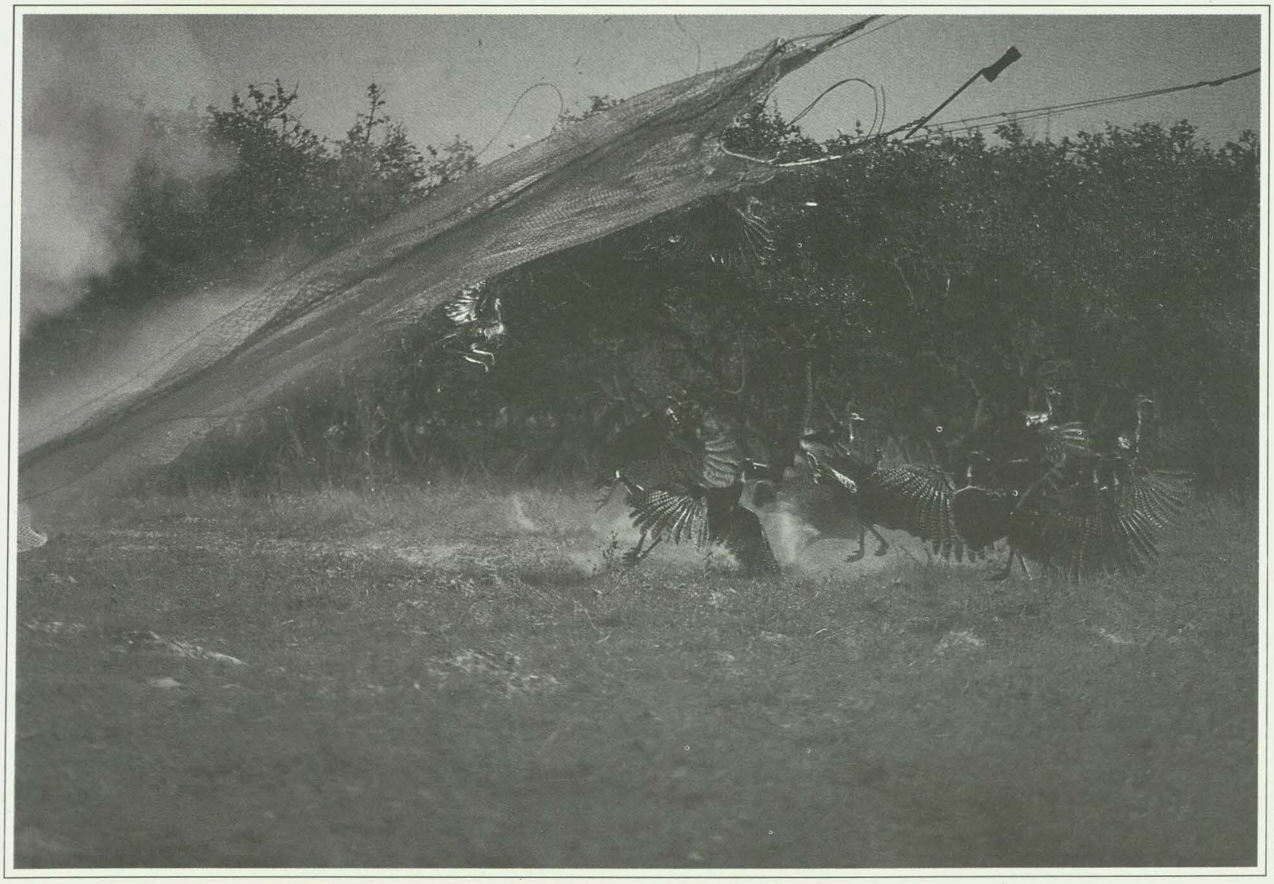
The turkey trapping program, incidently, resulted in the agency's research personnel pioneering the sophisticated trapping techniques currently practiced by researchers throughout the country.

Throughout its history, wildlife management has proved to be a learning process. Along with the victories, there were defeats. Until 1953, for instance, Florida attempted to maintain a turkey hatchery in which pen-reared birds were produced for release into the wild. But regardless of the "wild blood" coursing through their veins, the pen-reared birds simply were unable to adapt to the wild. The ones that survived at all did so by making their way to farmyards where they took up with domestic poultry.

Even more serious was the fact that the pen-reared turkeys were carriers of such diseases as fowl pox and blackhead, both of which cause wide-spread mortality among wild turkeys.

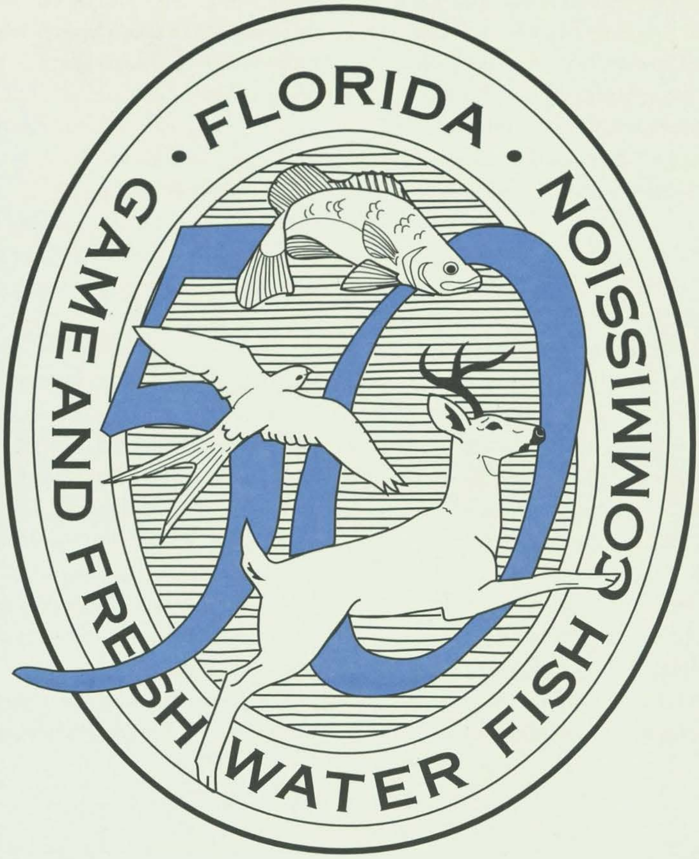
Deer management also proved to have its pitfalls. For many years, especially in south Florida, the screw-worm fly was one of the primary limiting factors to Florida's deer herd. In 1958 the parasite was eradicated, and the state's deer population rose rapidly – unfortunately beyond the carrying capacity of the habitat. That, complicated by other factors, left deer vulnerable to disease and other parasites.

Researchers sharpened their skills, however, and deer and other game animal ▷



DAVID JOHNSON

Commission researchers pioneered the turkey-trapping techniques now practiced by scientists throughout the country.


FLORIDA
GAME AND FRESH WATER FISH COMMISSION
50

50 Years as Steward of Florida's Fish and Wildlife

populations responded to the scientific advances that went into wildlife management. Today, Florida's deer herd is estimated at near 750,000 animals.

Likewise, quail research begun in 1946 revealed that habitat improvement, rather than stocking more birds, was the key to successful quail management.

The Commission also undertook an extensive study of the mourning dove. Although officials already knew a large percentage of Florida's autumn dove population consisted of migratory birds, questions about how to manage them and how to set up an equitable division of dove hunting opportunities would require research to answer. This study was the basis for Florida's dove hunting regulations as they exist to this day.

Waterfowl also commanded the attention of wildlife researchers since the beginnings of wildlife management in Florida. In 1948, the Commission hired a waterfowl biologist and a student to study the Gulf Hammock tract.

Another investigation of native and migratory ducks revealed the amount of stress that Florida's rapid development was causing for the state's waterfowl. The Commission began a rigorous lease and purchase project to develop and manage suitable waterfowl areas for future hunting. In 1954, the Commission acquired the Apalachee WMA in Jackson County and, in 1957, the Guana River WMA in St. Johns County. Both are prime waterfowl areas and still provide extensive duck-hunting opportunities. Other public waterfowl-hunting areas were developed later at the IMC and Occidental WMAs, the Hickory Mound Unit of the Big Bend WMA and other sites.

Even though the agency's responsibilities revolved around game species during its early years, the constitutional amendment that created the Game and Fresh Water Fish Commission clearly said the Commission would exercise the state's powers regarding (all of Florida's) "...wild animal life and fresh water aquatic life..." Still, it wasn't until the early 1970s that the agency began to undergo major changes that resulted in allocation of more and more resources to address nongame, imperiled species and environmental concerns.

In 1972, the Commission produced the first official state endangered species list with attendant protective regulations. By 1973 the list was expanded to include threatened species, and in 1979 it added species of special concern.

Florida greatly intensified its commitment to nongame wildlife with the 1983 legislature's creation of the Nongame Wildlife Trust Fund. Annual revenue in the fund peaked at $2.6 million in fiscal year 1989-90. Eighty percent of the trust fund comes from surcharges on registration fees for out-of-state vehicles when they are registered in Florida for the first time.

Today, 49 percent of the agency's expenditures focus on environmental and wildlife issues other than hunting and fishing.

From its early days as the state's gamekeeper, the Commission has evolved into the official body that bears responsibility of caring for one of the most complex and magnificent wildlife systems on Earth. The Division of Wildlife and all the agency's other divisions and offices pool their resources and expertise to carry out the duties defined in the Game and Fresh Water Fish Commission's stated mission: "To manage freshwater aquatic life and wild animal life and their habitat to perpetuate a diversity of species with densities and distributions that provide sustained ecological, recreational, scientific, educational, aesthetic and economic benefits."

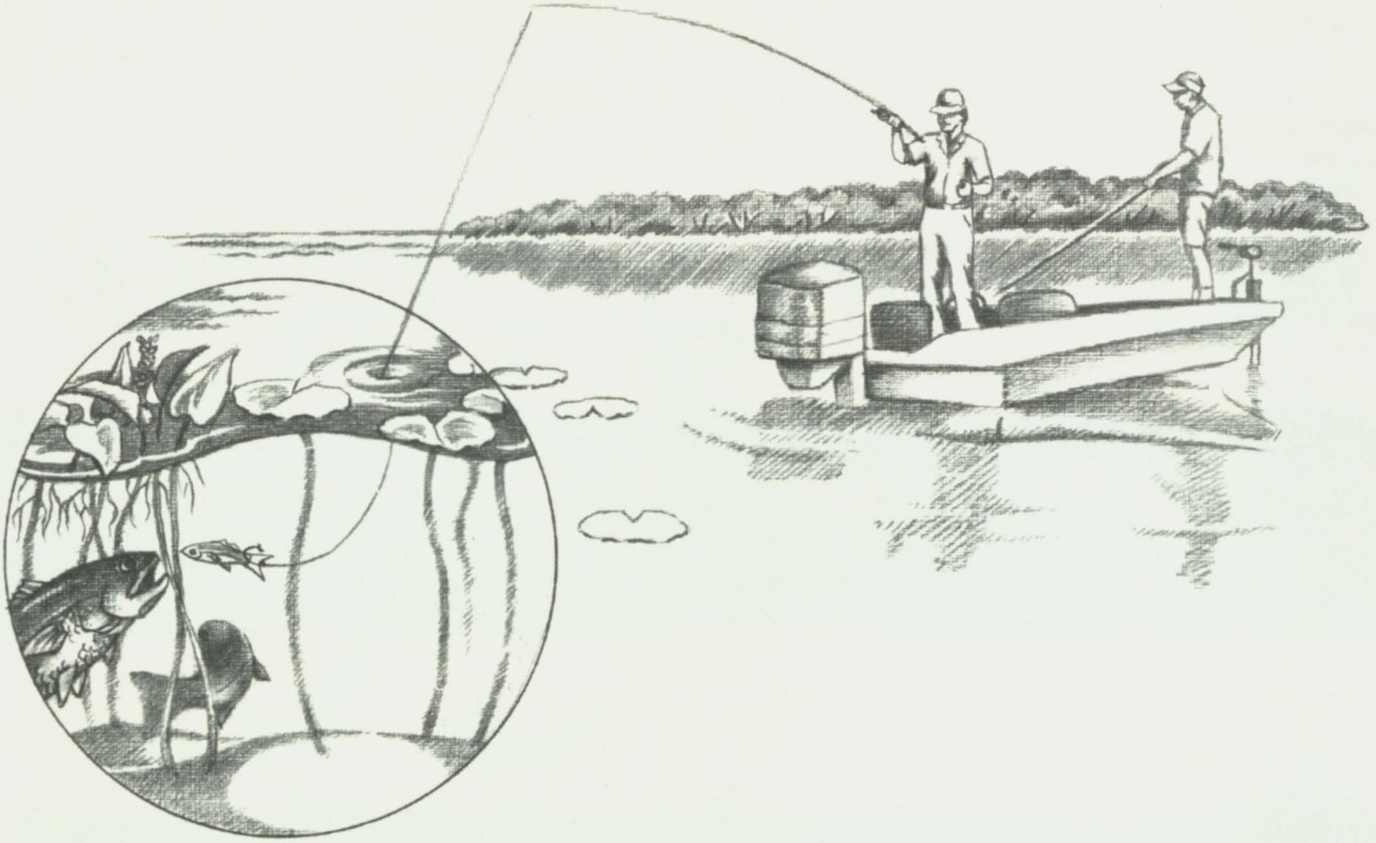
That mission will never be a stationary target; it will always remain a process.

Henry P. Cabbage is a public information director in the Commission's Tallahassee office.

Running Under

Proven Techniques for Wild Shiner Fishing

Text and Photographs by Richard Farren



I was somewhat skeptical about Jim Childress' proposed method for shiner fishing. He runs a bass-fishing guide service in Astor that specializes in shiner fishing. He seemed to think we could get wild shiners to drag a hook and a fishing line far back under mats of floating vegetation, right into the jaws of waiting largemouth bass. Childress calls it "running under."

I've done my share of shiner fishing, mostly on Lake Okeechobee and Lake Jackson, but I don't remember ever encountering such cooperative bait. I kept picturing that little cartoon worm with the big mustache – the one that insulted the fish, which would attack out of anger, only to become impaled upon the bare hook when the worm stepped aside at the last moment.

The standard approach to shiner fishing in the dark ages was to cast a shiner and a bobber next to a patch of weeds and wait for a bass to pick up on the vibrations of the distressed fish. We always knew the big fish were "back in the weeds," but the edge was as close as we could get. If a shiner wanted to swim into the weeds, it was our job to ease it quickly back to safety. The problem was we were fishing in the right neighborhood, but not the right back yard. We caught bass when they hunted for food along a weed line, but not when they were settled into a comfortable area between meals.

Of course, in the years since, techniques like flippin' have opened up the thickest vegetation to the bass angler. But there are still places where the big bass lurk and lures can't go.

Running under is a fishing method that relies on the strength of the native golden shiner, which is superior to that of the so-called "commercial" shiner. As a technique, the term "running under" means just that, running the shiner as far under the vegetation as possible. Not just a few feet either – Childress routinely works his shiners as far as 30 or 40 feet back under the cover.

"The most important thing is to get them started in the right direction right away," explained Childress, who uses what might be termed a conditioning program to "train" his shiners to swim under the nearest vegetation as soon as they hit the water.

Childress floats flat pieces of plastic foam in the shiner tanks outside his tackle store. Naturally, the shiners gather beneath the foam for its shade. As it floats around at the mercy of the air currents, the shiners follow it, always moving to stay in the shade.

After a few days of chasing the shade around the tank, the shiners are ready to be fished. When removed from the darkness of a live baitwell and dropped into the sunshine next to a patch of floating vegetation, they generally do what they've done for days: head straight for the shade.

As you might expect, this approach works best when the sun is high in the sky, which not coincidentally is when bass are most likely to be suspended deep beneath patches of floating vegetation.

On many central Florida lakes, floating water hyacinths get locked into patches of spatterdock lily pads growing from the bottom. The stems and roots of the pads hold the island of floating vegetation in place. Childress introduced me to his running-under techniques in patches like this on Orange Lake.

Fishing among the forest of lily pad stems makes the whole process a greater challenge. After the shiner takes one or two turns, it's hard to tell where it's hiding. The line might appear to go straight into the weeds, but the bait actually could be on the other side of the boat.

For obvious reasons, Childress uses 30-pound test line, Ambassadeur 6500 reels and stout, 7-foot rods. He hooks his shiners just below the dorsal fin and slightly toward the tail.

When casting, he grips the rod in his right hand, pulls a few feet of line off the spool with his left hand, then uses a gentle, pendulum-type underarm swing to drop the bait next to the weeds. If he keeps the line tight, the hook location will allow the shiner to enter the water upright and pointed in the right direction. As the shiner begins its journey, he lets the line trickle out through his fingers to follow its progress.

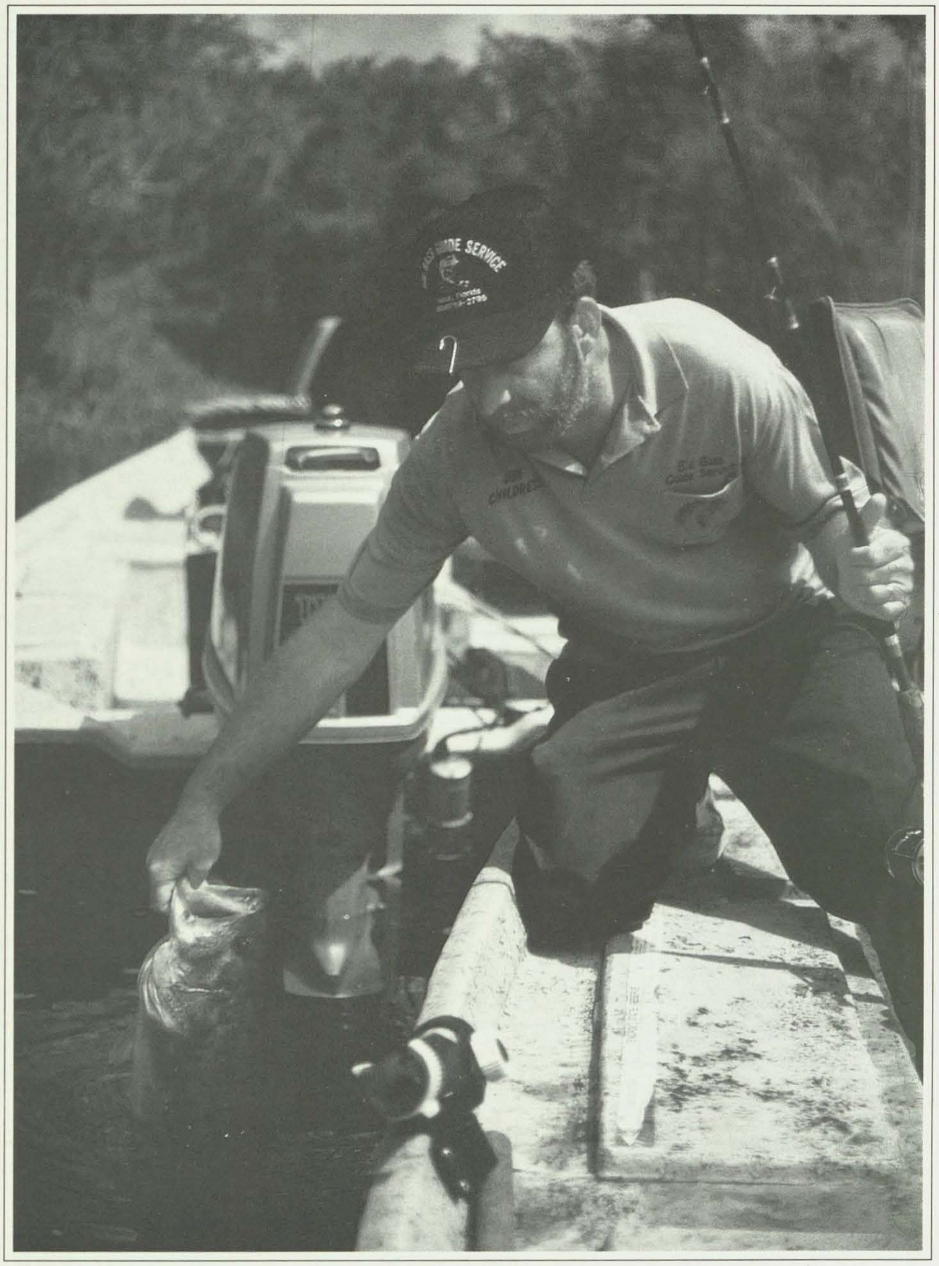
If the sunlight-to-shade conditioning doesn't take over and the bait swims the wrong way, a quick snap of the line sometimes turns them in the right direction. If they don't swim far enough into the shade, a little tug often will send them on their way again.

Being a novice, it took me a few dozen tries to get the bait to swim way back under the vegetation where the bass were waiting. The hard part came when it was time to horse the bass, or the bait for that matter, back out of the weeds. Steady pressure and patience usually won the battle in both instances.

It's a little harder than it sounds, especially getting the shiner into place. The cast has to be accurate – too far from the weeds and the shiner won't find the cover, too close and the shiner won't swim deep enough to avoid getting hung up in the roots hanging down from the floating vegetation. Place it just right and your bait will submerge a bit before heading back into cover.

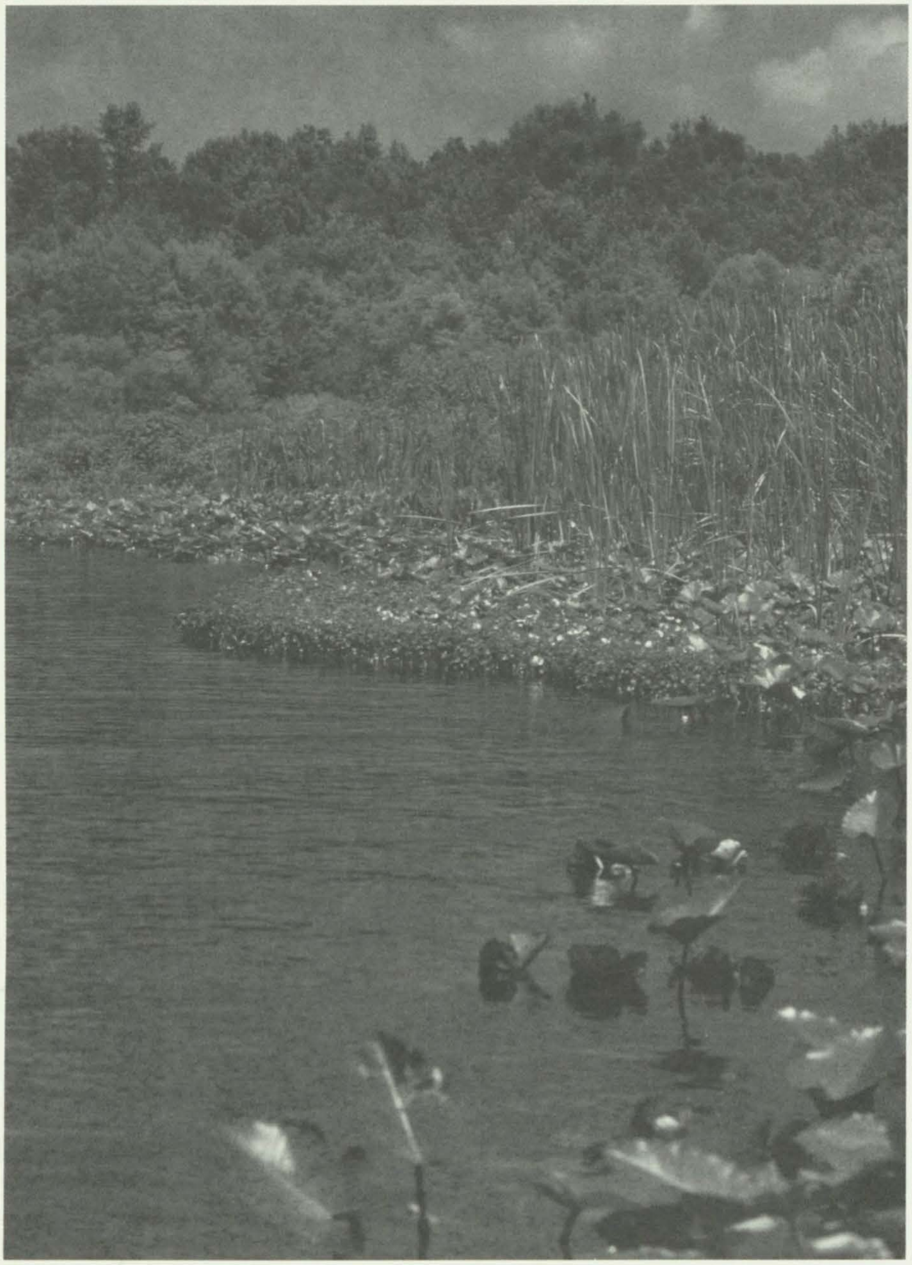
Once you get the hang of it, you'll be able to follow the bait's progress through the vibrations transmitted as the line runs through your fingers. You'll also be able to know when the shiner senses a predator by the way it changes direction or stops suddenly and starts back out.

The other thing that will happen is you'll catch fish, sometimes lots of fish – big fish! When you find bass this way, they're seldom alone, but are congregating to take advantage of the cooler conditions. Once he locates fish, he's able to return to the same place day after day. ▷



Jim Childress caught this 8-pound bass while "running-under" on the Ocklawaha River.

The term "running under" means just that, running the shiner as far as 30 or 40 feet back under the cover.



When fishing the Ocklawaha, look for vegetation that's stacked up along the bends.

On the other hand, he also doesn't spend too much time fishing under a particular patch of weeds. When he swims two or three baits close to the center of a weed patch, but they stay calm and unmolested, he pulls anchor and starts looking for another spot.

When fishing a river, like the St. Johns or Ocklawaha, Childress looks for floating rafts of water lettuce and hyacinths that have stacked up against the outside of bends in a flowing channel. Another good choice is any vegetation-covered slough running off the main channel that has sufficient current. Any place with the combination of shade and a current to deliver food is likely to hold fish.

Under these conditions, Childress likes to anchor upstream, usually about 30 feet from the edge of the weeds. From there he's able to use the same current that piled up the vegetation to carry his bait to where the bass are lurking.

In lakes dominated by open water and submerged hydrilla, Childress takes a different approach that he and a friend shared with me one morning on John's Lake. Part of a small chain of lakes near Winter Haven, John's Lake is like innumerable other small lakes in Florida, with large beds of hydrilla growing up from the bottom. Beginning at first light, and with the use of an electric motor, we trailed lip-hooked shiners over the hydrilla, looking for areas where the bass were feeding actively in the open water between the vegetation and the surface.

It takes between one-and-a-half and three feet of clear water above the hydrilla for this approach to work. It's nearly impossible to troll shiners in or near an area where hydrilla has reached the surface.

We trolled three lines, one on each side of the boat and one straight out the back. By holding the baits at different distances from the boat we were able to make fairly tight turns in the small lake, allowing the lines to cross and uncross without tangling.

We started catching bass (and the occasional 10-pound gar) during our first pass, with the strikes always coming two or three at a time. We dropped a marker buoy at every strike. After deploying four buoys, we had covered most of the lake and had a pattern to troll by. It worked so well we could almost predict when the next hits would come.

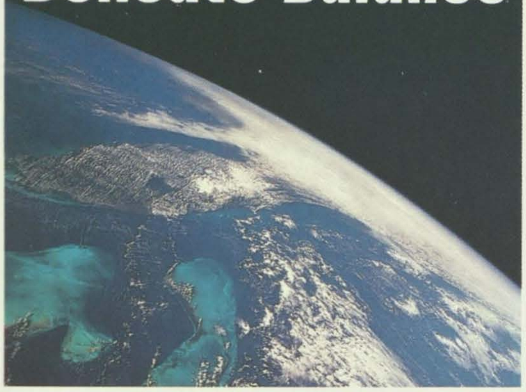
"It's like that sometimes: reliable and predictable," Childress pointed out. "Once you find a pattern and location that works, you can stay with it until the conditions change."

Changing water levels, hyacinth eradication, hydrilla growth and even wind-shifts can alter the fishing pattern. Jim counters by regularly fishing dozens of lakes and rivers throughout central Florida, staying in touch with where the fish are holding and how actively they are feeding.

It's a lot of work, but it pays off for his clients. As for me, I'm still looking for that shiner with a moustache. ◆

Richard Farren is a free-lance writer specializing in outdoor recreation. He recently co-authored ***Fishing the Big Bend*** *with Bob McGowan, available through Woodland Productions, 2208 Hickory Court, Tallahassee, FL 32311.*

Delicate Balance



Species: Florida Scrub Lizard (*Sceloporus woodi*)
Florida Status: Unlisted
Federal Status: Under Review

White sand, scraggly sand pines, clumps of stunted evergreen oaks and Florida rosemary baking in the sun provide ideal living conditions for the Florida scrub lizard and other species endemic to Florida's unique scrub habitat. Scrubs adorn the tops of old sand dunes and are maintained by naturally occurring fires every 15-100 years.

One of the most conspicuous denizens of peninsular scrubs is the Florida scrub lizard, which often is mistaken for the larger, stouter, southern fence lizard (*Sceloporus undulatus undulatus*). The slender, long-legged scrub lizard is more adapted for running along the ground than its tree-dwelling cousin. Juveniles and females resemble fence lizards in having dark, wavy bands on their rough-scaled, gray-brown backs, but adult males lack these markings. The most distinctive characteristic of the scrub lizard is the dark brown stripe along the sides of its body. In both species, males sport two brilliant blue belly patches and throat spots bordered in black. This species reaches a maximum snout-to-vent length of 2½ inches.

The scrub lizard has the strangest distribution of any lizard in Florida. Populations dot the backbone of Florida from the Ocala National Forest to southern Highlands County along a few sand ridges, primarily the ancient Lake Wales Ridge. This species also occurs in remnant scrubs along the narrow Atlantic Coast Ridge from Titusville south to Fort Lauderdale and, surprisingly, in a few scrubs along the Gulf Coast in Lee and Collier counties.

Scrub lizards prefer xeric (dry) habitats with areas of bare sand, sparse ground cover and clumps of shrubs or trees. Scrub lizards sometimes occupy habitats adjacent to scrub (sandhills, scrubby flatwoods, xeric hammocks or even young citrus groves) if areas of bare sand are present and if fence lizards do not occur there. When you enter a scrub, this alert, little creature is often the first moving thing you see, because it likes to bask in the sunshine along trails, firelanes and sand roads.

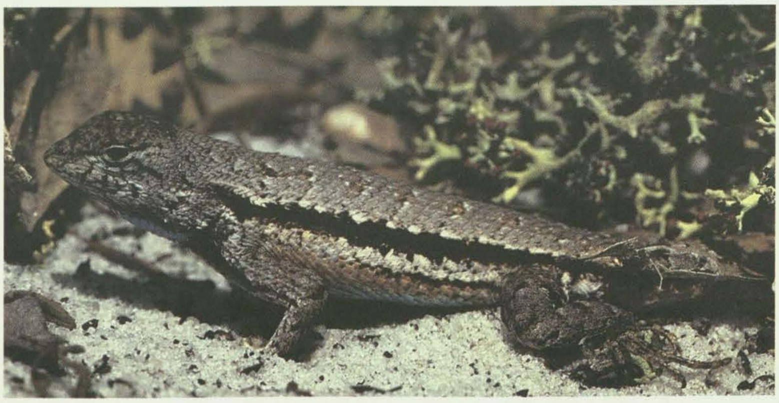
Much of a lizard's time is spent on the ground or on low perches on fallen logs or tree trunks waiting to ambush unwary prey. It feeds primarily on ants but will eat anything small enough to swallow, including other lizards. When startled, scrub lizards usually flee swiftly across the sand and reindeer moss to the nearest clump of shrubs. They also will climb trees and occasionally hide in loose sand or leaf litter by "shimmying" into it. Their major predators are snakes and Florida scrub jays.

After the March-June breeding season, females lay about three clutches of two to eight eggs (average four) during the summer. Eggs hatch from late June through early November, and the inch-long (excluding tail) babies reach sexual maturity in 10-11 months.

Almost all remaining unprotected tracts of scrub of any size are slated for development because of the desirability of their elevation and good drainage. Severe freezes in the past decade have caused the citrus industry to convert scrubs farther south to orange groves. When humans build subdivisions in scrubs, they often eradicate the scrub vegetation, control wildfires and bring house cats, which prey on lizards.

Fortunately, a chain of scrub "islands" in south-central Florida will be protected when the Lake Wales Ridge National Wildlife Refuge is established. Still, coastal scrub lizard populations are imperiled by human population pressure, and it may be too late for some of the few Gulf Coast populations.

– Kevin M. Enge
Division of Wildlife



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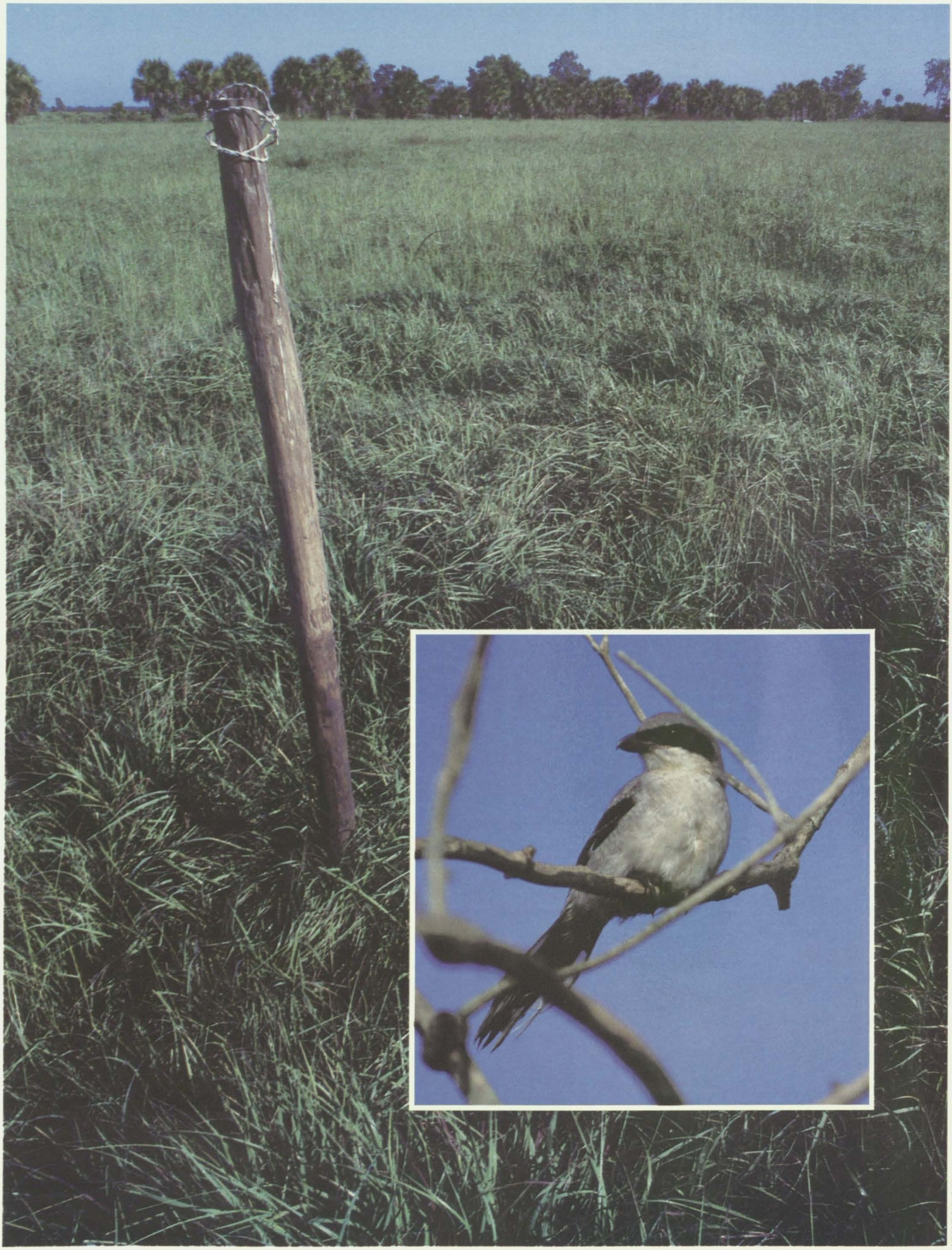


JAMES GODWIN

Perches For Butcher-Birds

By Lenela Glass-Godwin

"They are so wary now," Reuven Yosef fretted, as three loggerhead shrikes, a male and two young, eyed us from their perches in a dead wax myrtle just a few feet away.

Yosef, now the director of the International Birdwatching Center in Eilat, Israel, had been conducting doctoral research on these shrikes for many years. Heretofore they always had come right up to his feet or even to his hand to receive mice he brought them.

"Recent construction work on the ranch has made them more cautious," he explained. "Plus, the heat is bothering them."

The blistering temperatures this July day were uncomfortable to all of us. My husband, our son, Yosef and I were out in the middle of the 10,300-acre MacArthur Agro-Ecology Research Center in Highlands County. Buck Island Ranch, as it is usually called, is associated with the Archbold Biological Station, near Lake Placid. Although the heat was annoying, I wasn't complaining. I had never been so close to loggerhead shrikes, and I was enjoying the view.

Glimpses of loggerhead shrikes are becoming increasingly rare. Once fairly common, these beautiful gray, black and white passerines of open country are currently declining throughout their U.S. range at a rate of about 5 percent per year. Shrikes, also known as "butcher-birds" because they impale their prey before eating it, are exhibiting marked declines on breeding bird surveys in all continental areas. The loggerhead shrike has been on the National Audubon Society's Blue List of birds in trouble since 1972. The species is under consideration for either threatened or endangered listing by the U.S. Fish and Wildlife Service and already is so designated by several state wildlife agencies.

Once fairly common, loggerhead shrikes are declining throughout their U.S. range at about 5 percent per year.

Even though Florida is considered a stronghold of the species, the population is declining faster here than anywhere else in the country. According to Yosef and fellow researchers James N. Layne and Fred E. Lohrer, of Archbold Biological Station, the shrike population in peninsular Florida declined at about 9 percent per year from 1976-1981 and a further 6.1 percent per year between 1981 and 1989.

If the current trend continues, these scientists warn, south-central Florida is likely to lose loggerhead shrikes from its breeding fauna in the near future.

There are several suspected causes of this dramatic decline of shrikes. One possible culprit, at least in the Southeast, is the imported fire ant, which preys upon the eggs and young of ground- or near-ground-nesting birds.

But Yosef suspects pesticides. Compared to nests found in the beginning of this century, current hatch rates have gone down seriously. Every second nest found today has one or two eggs that won't hatch.

"Pesticide ingestion by shrikes very well may be one of the reasons for the decline," Yosef said. "We also have found that shrikes in citrus groves are in poorer health than they are in pasture or urban areas. Insecticides and mitacides that are sprayed on citrus may contribute to that."

Shrike researchers also contend that the loss of breeding habitat is adversely affecting shrikes. Yosef agrees, but feels the biggest problem facing shrikes today is the loss of foraging habitat due to changing agricultural practices. In particular, he points an accusing finger at the loss of natural hunting perches from shrike territories. In his south Florida study area, neither nest sites nor foraging substrate were in short supply, so the lack of hunting perches was the most likely ▷

hindrance for shrikes on the ranch.

"I believe that U.S. populations of shrikes have been declining because continual removal of fencerows and other hunting perches has made utilizable foraging areas too 'costly' to defend," he said. "Fewer perches from which to hunt means the birds must forage in and defend larger territories. And larger territories make life difficult for these birds.

"Shrikes are small birds and are exclusively predatorial," he continued. "They have extremely high metabolic rates and must expend a lot of energy hunting and supplying food to their young. When their territories are very large, which occurs when there are few hunting perches, they spend much time and energy defending them against intruders. Consequently, adult shrikes may suffer from poor nutritional condition."

Using a recently developed technique called ptilochronology, Yosef assessed the nutritional condition of shrikes that he live-trapped on his study sites.

"Ptilochronology is similar to the study of growth rings on trees," Yosef said. "Each growth bar on a bird's feather represents 24 hours' growth. The wider the growth bars, the better the nutritional condition."

Ptilochronology revealed that the shrikes defending larger territories were less healthy than their smaller-territory counterparts.

"Birds in larger territories were flying almost twice as much as those in smaller territories," Yosef reported. "Still, the adults would continue to deliver the same amount of prey per hour to their young, no matter how much it cost them physically."

Yosef theorized that if he could help the shrikes on Buck Island Ranch to shrink their territories, their nutritional condition might improve. Perhaps more breeding pairs might come to the newly opened areas as well.

"My idea was to go in, find all of the shrike territories I could, map them, and then manipulate some territories while leaving others as a control group," he explained. "Shrikes are not hunting a given area because there are no perches available. They are sit-and-wait predators, so they must have perches in their foraging areas."

Yosef chose 22 territories on the ranch to test his theory. He added perches in strategic locations in half of these territories but left the other half alone. As he predicted, shrike territories decreased in size.

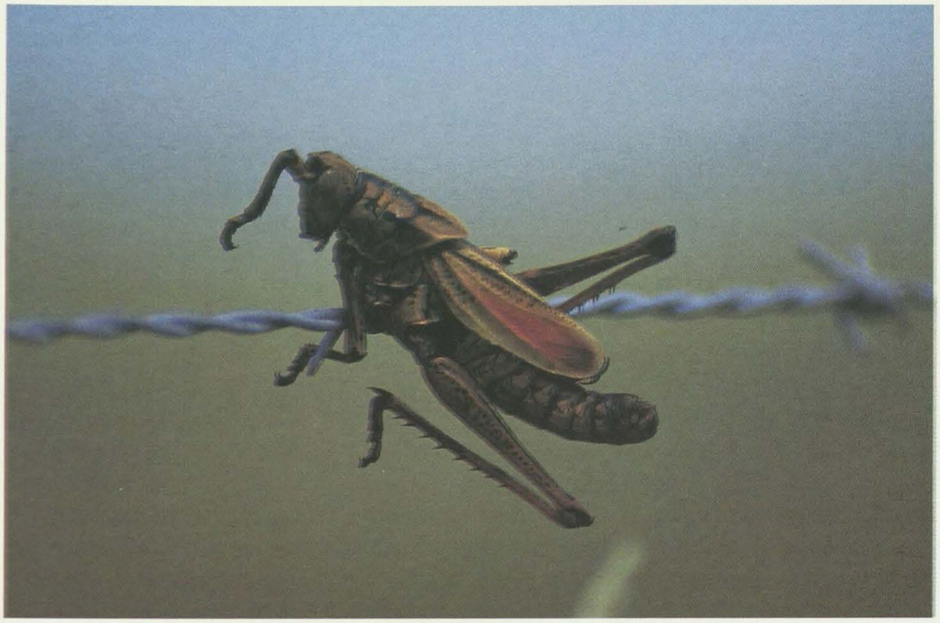
"Our territories on the ranch shrank from 14 hectares to 4-5 hectares," he said. "And," he added with just a hint of pride, "mating pairs in these territories have increased from 11 to 19. They are healthier, too."

Like any good biologist, Yosef is quick to point out that additional research into the effects of territory size on loggerhead shrikes is in order. Buck Island Ranch is quite a different habitat type than, say, a midwestern row-crop farm.

"On many agricultural properties," Yosef noted, "trees are generally found in fencerows. This makes the situation even more challenging for shrikes. If the birds

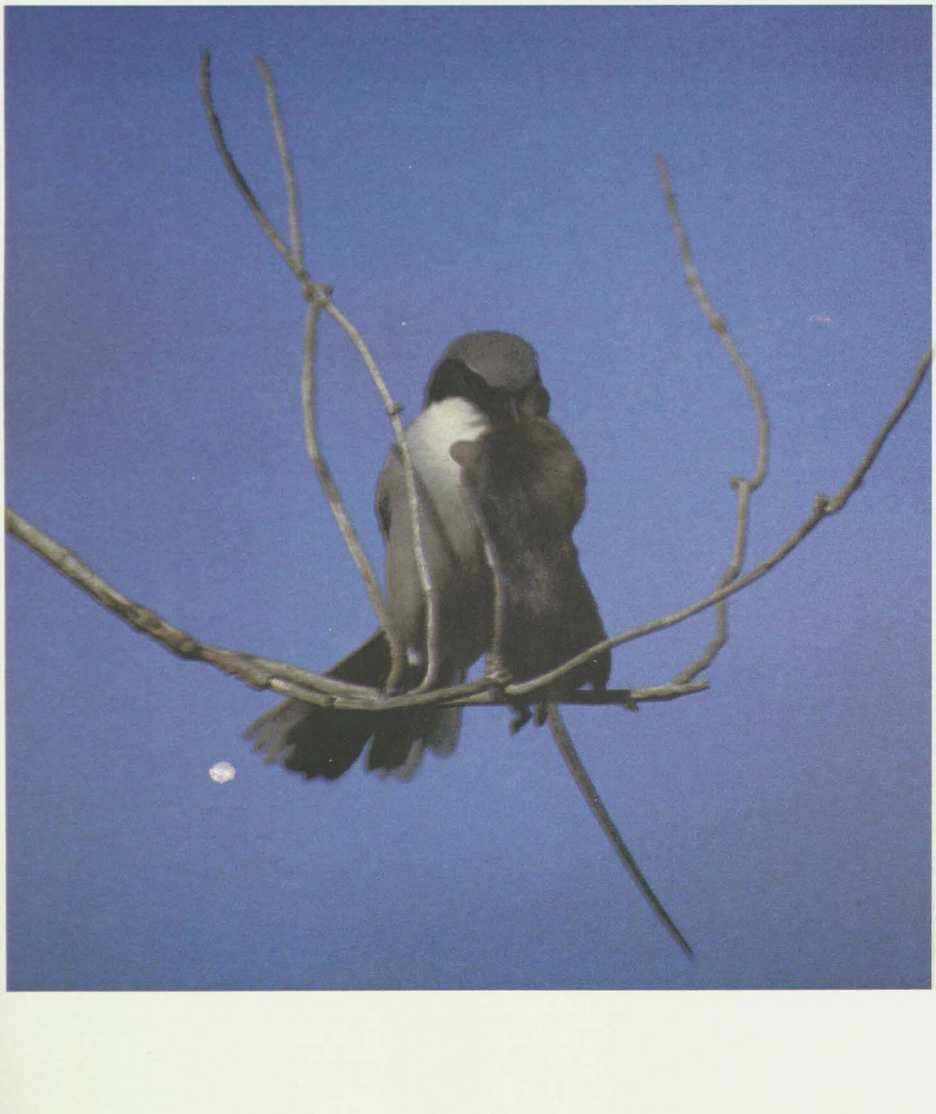
JAMES GODWIN

Loggerhead shrikes forage in open country but need perches from which to hunt.



REUVEN YOSEF

Shrikes impale their prey before eating it – earning the nickname "butcher-birds."



Loggerhead shrikes are predatorial and expend a lot of energy hunting and supplying food to their young.

REUVEN YOSEF

are forced to nest in and forage on a small area like that, predation will increase and nesting success will decrease. This has been demonstrated in several areas of the country. We are lucky here at Buck Island Ranch because we do have some hammocks with wax myrtles, cabbage palms and blackberry bushes. In areas of the ranch where there are few fences and trees, shrikes are totally absent."

In any event, the results of Yosef's work are good news for Florida shrikes, and he contends that adding perches in suitable habitat in other areas of the country may be just the ticket for turning around the steady decline of the species.

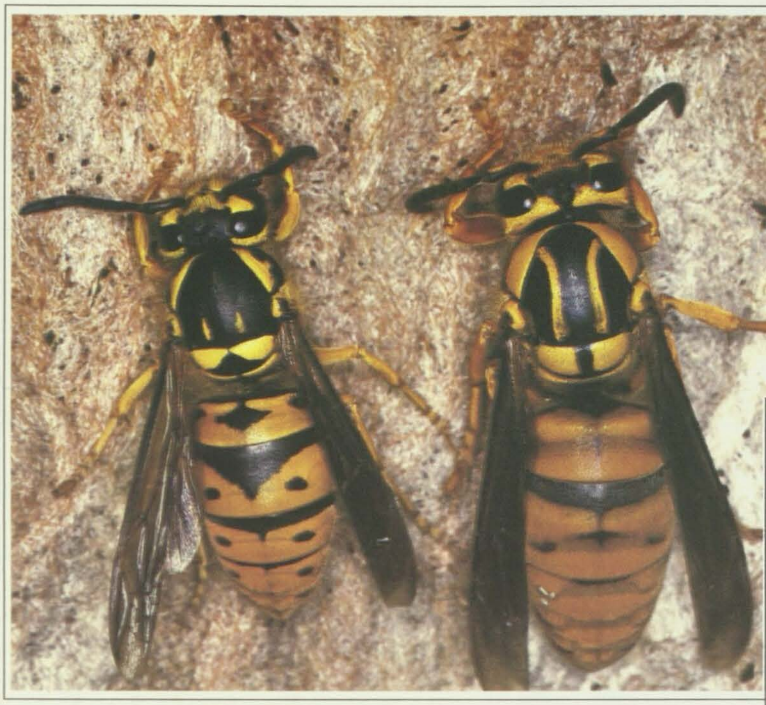
"Perches that are appropriate for the specific habitat and portion of the country can be made and added to territories," Yosef said. "The perches we added here are the regular fenceline posts, about 54 inches high and with a short strand of barbed wire attached to the top." The barbed wire is an essential feature, because shrikes need it for impaling prey.

So, shrike lovers take note. Perhaps someday installing a shrike perch may be as routine as erecting a kestrel or screech owl box. If this is the case, and we can continue to see the dapper butcher-bird during the 21st century, Reuven Yosef's efforts will have paid off handsomely.

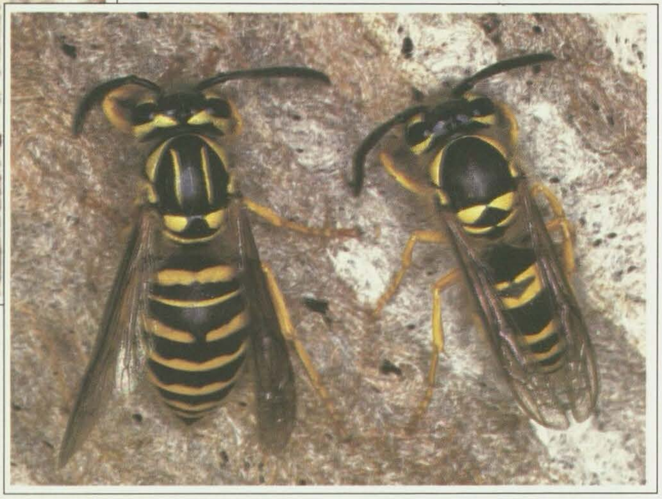
Lenela Glass-Godwin is a former nongame education specialist with the Commission, currently living in Alabama.

Archbold Biological Station is an independent facility devoted to long-term ecological research and conservation.

Yellowjackets



Yellowjacket queens: left ***Vespula maculifrons****, right* ***Vespula squamosa***



Yellowjacket workers: left ***Vespula squamosa****, right* ***Vespula maculifrons***

By Dr. James L. Castner and Dr. Gary N. Fritz
Photographs by Dr. James L. Castner

This summer, thousands of Floridians and visitors will make the most of our state's outdoor recreational opportunities. They'll enjoy camping in the woods, canoeing the lakes and streams and picnicking in the parks – among other activities.

Of course, they'll be sharing the great outdoors with Florida's wildlife. And insects are a big part of that wildlife. While flies, gnats and no-see-ums do little more than annoy us, there are other insects that leave a more painfully lasting impression – the stinging ones, such as yellowjackets.

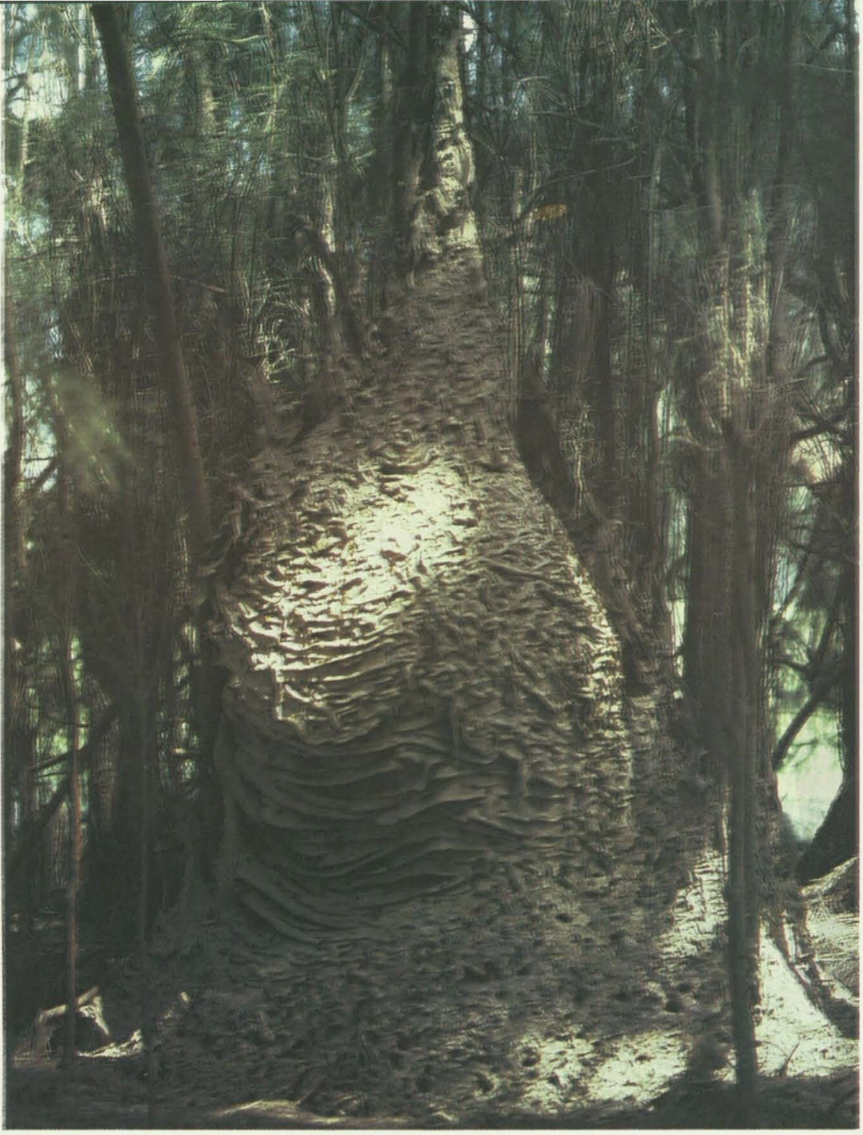
Yellowjackets are a group of brightly colored, stinging, social wasps. Of the 16 species in the United States, only two occur in Florida. Both are handsomely patterned with yellow and black markings on the body.

Three "castes" of yellowjackets occupy each nest, depending on the time of year: workers, queens and males. The individuals we see most often are workers – females that are approximately ½ to ¾ inch in size. They feed the developing and immature wasps and construct, repair and defend the nest. And although they usually take live insect prey, they sometimes scavenge, too. Yellowjacket workers often are seen around picnic tables, where they annoy picnickers by landing in food and flying away with very small pieces. This in itself might be tolerable, were it not for the painful sting that presents a threat to those humans allergic to this insect's venom.

Nesting

The nest and colony is started by one queen, a more orange female that is two to three times the size of the workers. The queen's function is to lay fertilized eggs. Both queens and males are produced in the fall. These castes then leave the nest and mate. Males die soon after mating, and the queens seek a sheltered place to overwinter. Sometimes they can be found under bark or in woodpiles. When spring comes, each queen constructs a small nest and lays eggs that hatch into workers. As some workers hatch, they eventually take over all the nest duties except egg-laying.

Yellowjackets usually build their nests in the ground, although they sometimes select more unusual sites. The species *Vespula maculifrons* makes smaller colonies, seldom exceeding 5,000 individuals. Their nests range in size from a bowling ball to a basketball. They consist of layers of combs of individual cells or chambers, where the queen lays eggs and the wasps develop. The combs hang down and are interconnected by short columns of nest material. There is just enough room between combs for wasps to move about freely. The combs ▷

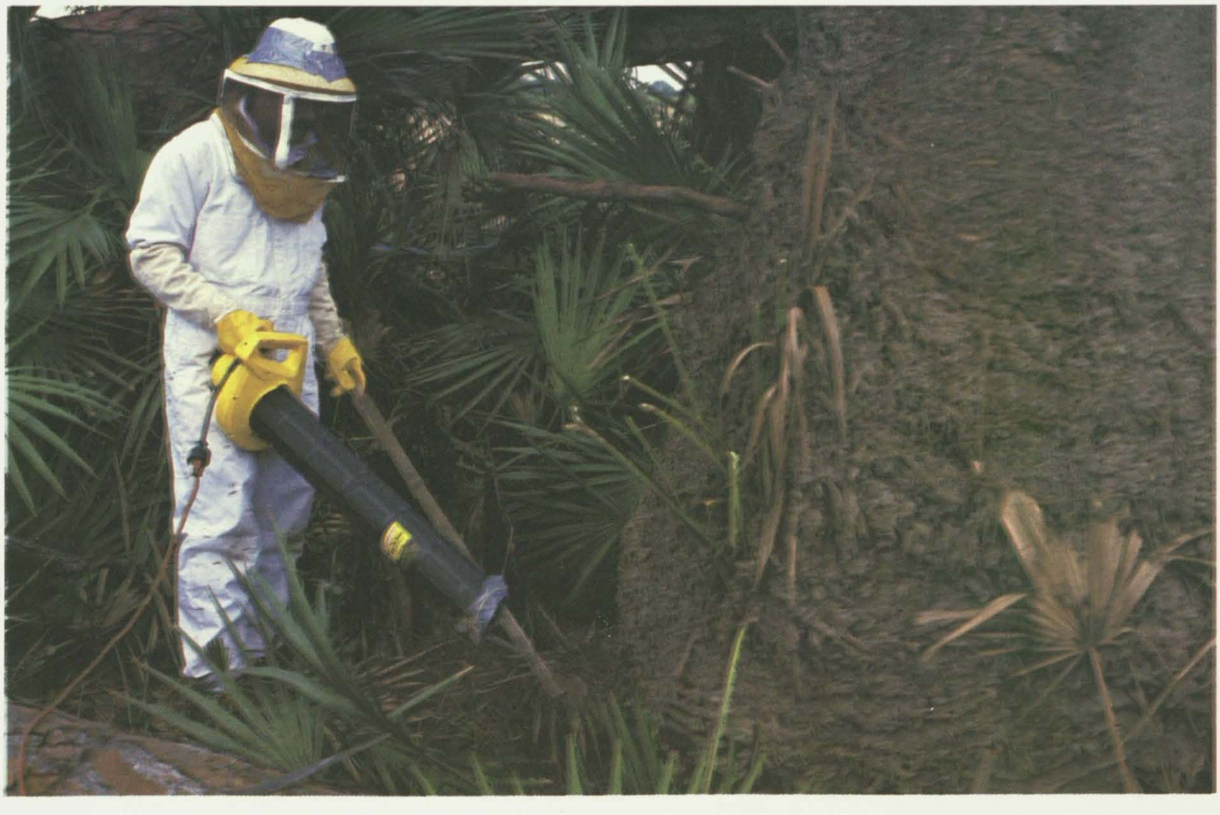


are covered by a gray or brown "envelope." They produce this "carton" by scraping wood and plant material into their jaws and mixing it with their saliva.

The nests of the second Florida species, *Vespula squamosa*, are basically the same in structure, but much more variable in size. An average summer colony may contain 15,000-30,000 adult wasps. And while most nests are underground, this is not always the case. This yellowjacket also nests in walls, bales of hay, deserted cars, the furniture of deserted houses and on the outside of houses.

Most nests are annual, dying out after the males and queens are produced and go on their fall mating flights. But in warmer areas such as south Florida, colonies sometimes continue to grow throughout the winter and may remain established in the same nest for several years. These are the circumstances that produce the giant yellowjacket nests. The largest nests we have seen were at the base of trees, with the trunk serving as a central support column.

In one case, the nest looked like a pyramid with the apex approximately



eight feet up the trunk. The diameter of the nest at the base, including the trunk, was about four feet. This nest yielded about 50,000-60,000 yellowjackets, but was collected in the winter. If it had been taken at peak capacity during the summer months, there easily could have been twice or even three times that many wasps inside!

Yet even a small yellowjacket nest is dangerous. The venom introduced into the human body from multiple stings can make a healthy non-allergic individual sick, and cause severe pain, swelling and later itching that seem totally out of proportion for such small insects. To someone allergic to these wasps, a single sting can be fatal. Approximately 15-20 deaths due to yellowjackets are reported each year in the United States.

Wasp Busters

Pharmaceutical companies have developed a series of injections for allergic individuals to help them develop a tolerance to the venom. Since they can't produce the chemical without yellowjacket venom, several companies have contracted with us to collect it from adult yellowjackets.

Dr. Gary Fritz first began to collect venomous insects 12 years ago while a graduate student. He adapted a leafblower to his specialized purposes, creating a "wasp vacuum." He formed a one-man company called WASPEX and offered free removal of yellowjacket nests. It didn't take much advertising before he learned of enough nests to fill his venom orders. Property owners were delighted to be rid of a dangerous problem, which normally would have to be removed by an exterminator at considerable cost.

Today, we continue to collect and remove a limited number of wasp nests using the same technique. Due to the abundance of yellowjacket nests, we restrict our collecting efforts to the area surrounding our Gainesville-based operation. But, for unusually large nests, we have traveled throughout the state.

We also are seeking paper wasps, which tend to make their nests in the low branches of trees bordering water. Fishermen often run into such nests, with painful results, when their lures get hung up in the cypress branches. Paper wasps are bigger than yellowjackets, usually about 1¼ to 1½ inches long, and are typically brown with dark wings. They make nests of a single open comb that may range from the size of a saucer to that of a dinner plate. A common related species frequently can be found on the eaves of houses. If anglers or canoe enthusiasts know of heavy concentrations of such wasps and nests, we would appreciate the information.

It is not advisable for homeowners to attempt to eradicate or remove a yellowjacket nest themselves. Yellowjackets are extremely aggressive and emit an alarm chemical or pheromone that quickly volatizes into the air when they are disturbed. This chemical alerts and excites any nearby member of the colony so that the insects immediately come to the defense of the nest. They also physically wipe this chemical onto intruders, which serves as a beacon to their nestmates, identifying the source of the disturbance. Therefore, only trained pest control personnel or exterminators should remove these dangerous wasps.

[**Editor's note**: The best way to deal with yellowjacket stings is to avoid them. When picnicking, don't leave food uncovered or drinks open. But if you do get stung, physicians generally recommend taking two aspirin or an antihistamine if you aren't allergic. If you are allergic or don't know for sure, take a special allergy or sting medication with you on outdoor excursions.]

Dr. Gary N. Fritz is a research entomologist in the Department of Entomology & Nematology at the University of Florida. The number for WASPEX is (904) 374-1483, but should be used only for nest problems near Gainesville.

Dr. James L. Castner is a tropical biologist specializing in insect defense mechanisms and employed as a scientific photographer by the Department of Entomology & Nematology at the University of Florida.

Left top: While most yellowjacket nests are underground, the wasps also nest in walls, bales of hay and deserted cars, not to mention trees.

Left bottom: Vacuuming adult yellowjackets from giant nest at base of a palm tree.

Below: Paper wasp.

Guana River

Wildlife Management Area and State Park

By Susan Cerulean

If you're driving south on A1A through Jacksonville Beach, looking for some natural Florida to explore, the developed beach front probably won't excite you. But keep going.

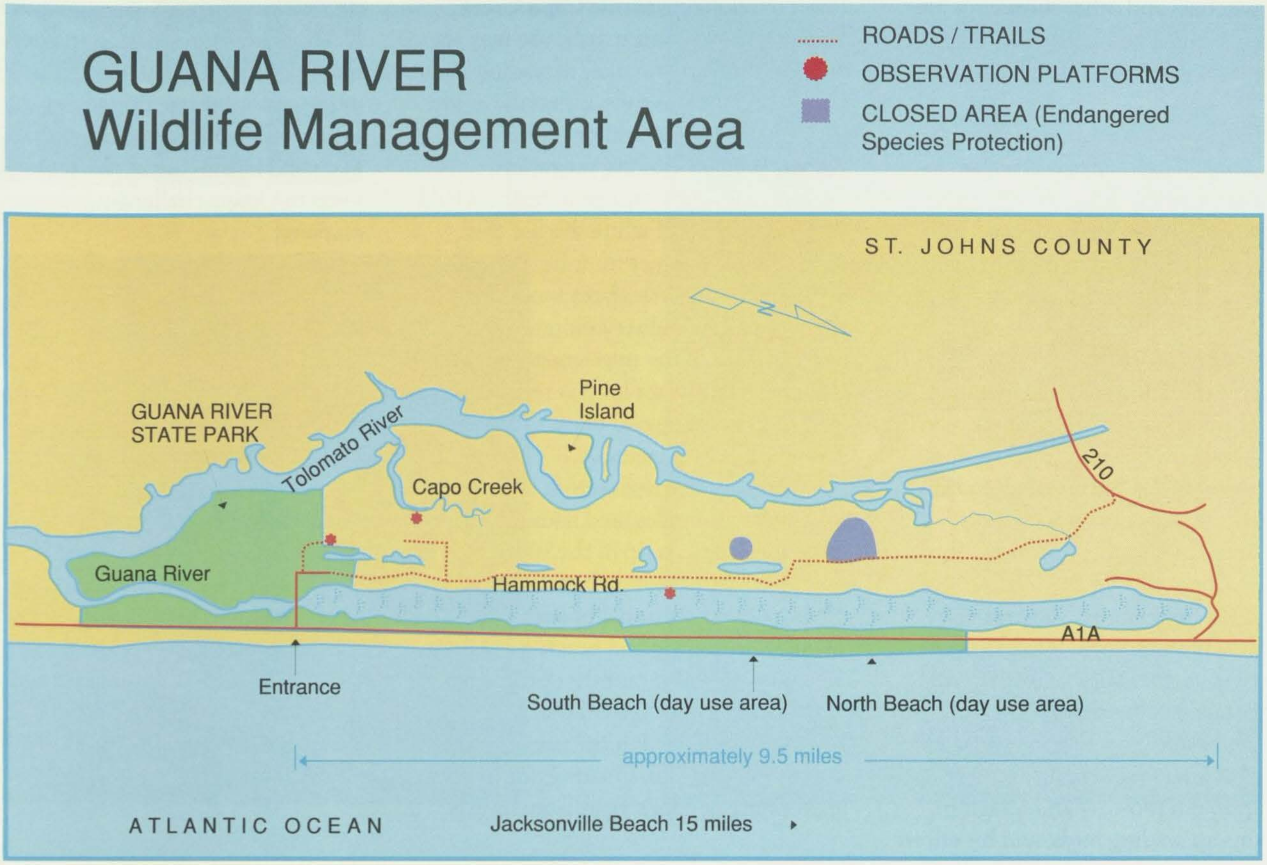
Just beyond Ponte Vedra Beach, the landscape takes center stage: abruptly steep sand dunes to the left, a long stretch of river and marsh with a palm backdrop to the right, and a wealth of wildlife in between. This is Guana — the River of Palms.

Here, Florida's native vegetation begins a subtle shift from temperate to tropical. Tender mangroves sprout and periodically freeze back, and south Florida specialties such as wild coffee mingle with magnolias and oaks. Thousands of acres of beach, salt creek, lake and marsh invite your exploration. With its transitions between north and south, and fresh water and salt, Guana supports abundant, diverse wildlife, including 201 bird species. Opportunities for photographing and observing wildlife are unlimited. The Florida Game and Fresh Water Fish Commission (9,815 acres) and the Florida Park Service (2,400 acres) manage the property cooperatively.

Wildlife viewing: If you approach Guana from the north, two State Park day use areas, **North Beach** and **South Beach**, offer parking and beach access. In the winter, use a spotting scope or binoculars to observe huge, black and white gannets, common loons and sea ducks offshore. Shorebirds, gulls, and terns also move along the ocean beach. Hawk and falcon migration can be spectacular along the dune line and over **Guana Lake** during April and October. A west wind or the trailing edge of a cold front can bring superb viewing opportunities. Local birders maintain that this is the best place in northeast Florida to see peregrine falcons as they migrate. Two threatened species, colonial least terns and loggerhead sea turtles, nest on the beach during late spring and summer months. Please avoid any areas designated "Critical Wildlife Area" during these seasonal nestings.

Guana Lake, a managed, brackish impoundment nearly 10 miles long, is a popular waterfowl-hunting area. Best access to the lake for wildlife watchers is the **Guana Dam Day Use Area**, about eight miles south. About 3,000-4,000 migratory ducks, coots, gallinules and grebes winter here; the dam and the observation tower on Hammock Road are good spots to set up a scope. On the north side of the dam, dabbling ducks such as blue-winged and green-winged teal, wood ducks, widgeon and gadwall are most common. Look south to the saltier river for mergansers, cormorants, bufflehead and other divers. White pelicans (January and February), ospreys and bald eagles often fish at the impounded lake. At low water levels, black-necked stilts, yellow-

GUANA RIVER
Wildlife Management Area



Salt creek marshes as seen from Capo Creek observation tower.

MARC EPSTEIN

legs, dowitchers and other shorebirds are abundant at the lake's north end. Try viewing from the **North Beach** parking lot.

While you're at the dam, pick up a map and regulations summary at the information kiosk to help you plan your route through the island's interior. Vehicles are permitted on interior roads only during the eight days prior to seasonal hunts. Otherwise, expect to hike or bring a bicycle.

Follow directions to **Big Savannah Pond**. At the interpretive overlook, you'll see a wading bird day roost directly east and the body of **Big Savannah Pond** to the north. At high tide, wood storks, roseate spoonbills, white and glossy ibis, egrets, herons and other wading birds rest and feed, especially from May through September. Unusually high numbers of black-crowned and yellow-crowned night herons congregate here as well.

Guana's wildlife biologist, Marc Epstein, is managing Big Savannah to create optimum roosting and foraging conditions for wading birds, and his efforts so far are successful (see page 22). Water levels in the pond encourage a high diversity of marsh vegetation, including spartina, sawgrass, spikerush and bulrushes, which nurture the tiny fish and crustaceans wading birds seek.

Exploring Guana's interior roads: As you continue north on **Hammock Road**, listen for the springtime song of painted buntings. These spectacular birds breed only on the northeast coast of Florida, and scattered west coast locations. Watch for the male, splashed with violet, yellow, scarlet and green, singing from an exposed perch on a small tree or shrub. You may spot a deer or two on Guana. The small herd of about 200 individuals is a typical size for a sandy sea island. A good look at a large hog is nearly guaranteed, Epstein said. Otters nest in interior ponds, and you may glimpse them in ditches or moving among the wetlands. You're likely to see a gopher tortoise and tracks of resident bobcats and gray fox on the sandy roads. While you're looking down, keep an eye out for the island's thriving snake population, including pygmy and Eastern diamondback rattlesnakes, and cottonmouths.

Turn left on **Capo Road**, and visit the beautifully constructed observation tower overlooking scenic **Capo Creek**. Here in the tidal salt marsh, you may see raccoons and any number of wading birds or sora and clapper rails, especially at low tide. Look aloft for swallow-tailed kites, numerous hawks during migration, ospreys year round and an occasional bald eagle. Hundreds of white ibis use this marsh in the summer months.

Continue north about four miles to the **Guana Lake** observation tower for another view of the impounded lake to the east. If the water level is relatively low, this can be a good place to see shorebirds and alligators.

Guana's offerings stretch to the north for many more miles, and additional trails trace the southern tip of the island, managed by the Florida Park Service.

Other recreational opportunities: Swimming, surfing and beach-combing are enjoyable most months of the year along the Atlantic Ocean beaches. Fishing is permitted in the ocean, on Guana River and in Guana Lake (with appropriate license). Boat launching is available at Guana River or Guana Lake (10-horsepower restriction in the lake). Request hunt map and regulations summary for information about extensive seasons. There are no camping facilities. Heat and biting insects can make summer visits to Guana challenging; come prepared.

Hours of operation: Beaches are open 8 a.m. until sundown, 365 days a year. Dam area open 24 hours daily, year round.

How to get there: From Jacksonville Beach, the Guana dam is 15 miles south on A1A. From St. Augustine, drive north 13 miles on A1A. At the Guana Use Area, obtain an area map and summary of regulations.

For more information: Contact Guana River Wildlife Management Area, 1239 SW 10th Street, Ocala, FL 34474-2797 (904) 732-1225; or Guana River State Park, 2690 South Ponte Vedra Blvd., Ponte Vedra Beach, FL 32082 (904) 825-5071.

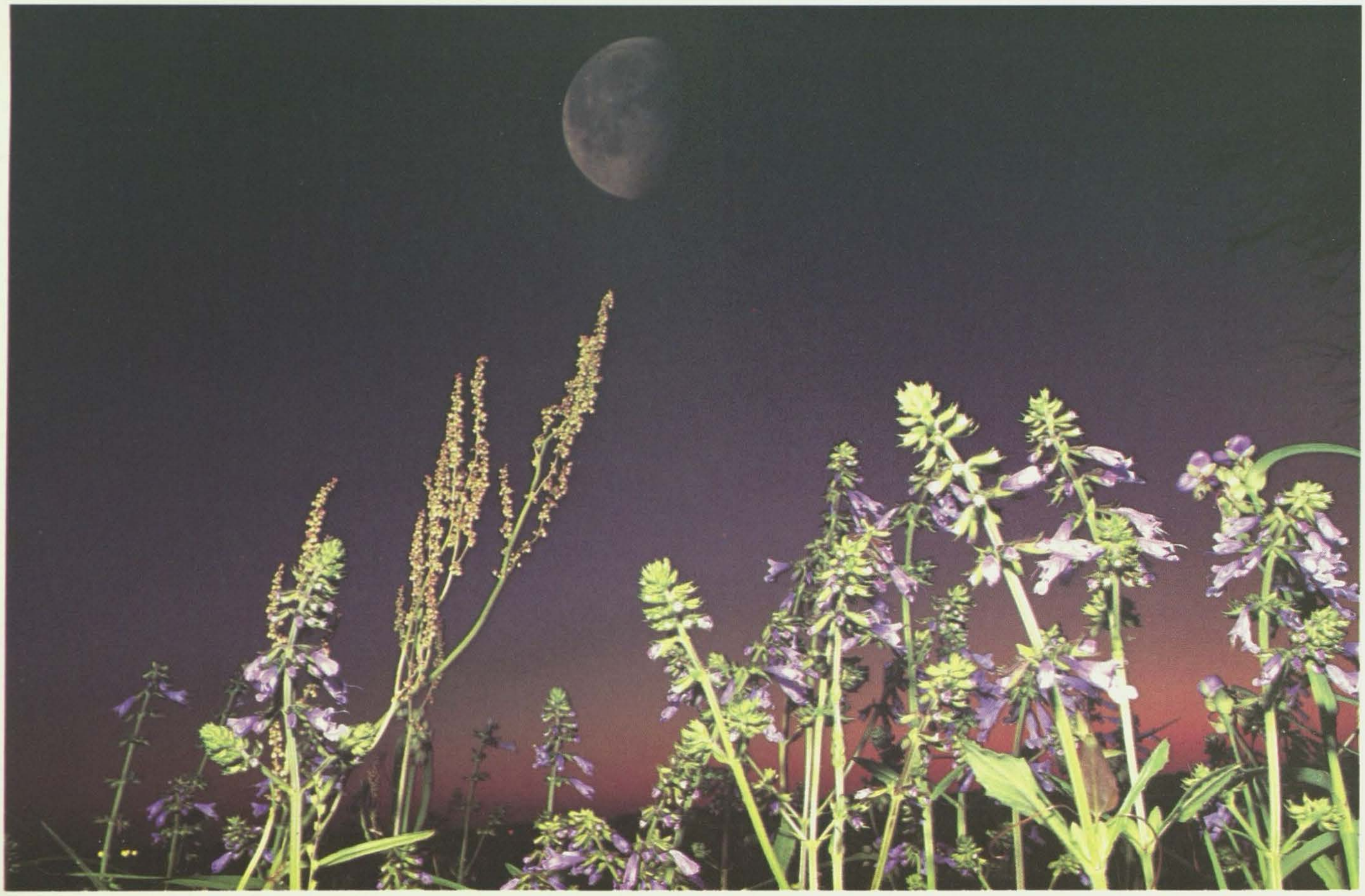
SUSAN CERULEAN

Boardwalks encourage access over the steep oceanfront dunes in Guana River State Park.

CHARLIE HEIDECKER

CHARLIE HEIDECKER

Lyre-leaved sage blooms all over the island in early spring.



MARC EPSTEIN

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SUSAN CERULEAN AND MARC EPSTEIN

The Man Behind the Marshes

Marc Epstein

Marc Epstein thinks his job is just about as good as they get. As the wildlife biologist for Guana River Wildlife Management Area, a position he's held for eight years, Epstein's seasonal duties include manning hunt check stations, managing controlled burns, designing and building interpretive displays and boardwalks, mowing the roads, surveying wildlife populations, cataloging and protecting archeological resources, and maintaining water-control structures. He's got nearly 10,000 acres to care for, essentially alone, like many other Commission biologists across the state.

Ride the length of Guana with Epstein, and you'll get a valuable lesson in wetlands management, as well as wildlife biology. His eyes light up as he points out a primitive-looking water-control device at one of Guana's interior ponds.

"Recognize that?" he grins, "It's called a trunk, first used on Carolina rice fields in the 1700s. Still works well today."

Designing water-control structures isn't hard, insists Epstein, once you understand the dynamics of water flow. Then again, water-discharge formulas aren't in every wildlife biologist's course of study either.

A Charleston native, Epstein's first love is the sea islands that shelter the South Carolina and Georgia coasts.

"Guana's the last in that chain of sea islands," he said, "and that's partly why I'm here."

He recently was promoted to statewide coordinator for wetlands and wildlife management and will share his expertise with other managers around the state. Epstein has a Master of Science degree in Wildlife, and also is professionally certified by The Wildlife Society.

He's a man who knows his territory, pointing out his next challenge, 40-50 acres of disturbed pinelands that he plans to restore to its original hydroperiod. Assistance with controlled burning, hunt management, wildlife surveys and other tasks comes periodically from Commission law enforcement personnel and nongame, fisheries and waterfowl biologists.

And he knows where the wildlife is. For the last five years, Epstein has been expanding the offerings on Guana for wildlife watchers, as well as hunters. Mountain biking and birding have increased notably in the last five years. He carefully chooses educational and interpretive information for the three kiosks on the property, since his budget doesn't allow for traditional interpretive signing.

"I love working at Guana," concluded biologist and jack-of-all-trades Marc Epstein. "Even mowing the roads. It's hot, dirty, buggy — but I can look back and say 'it looks good.'"

It surely does.

Susan Cerulean is a wildlife biologist, free-lance writer and frequent contributor to FLORIDA WILDLIFE.

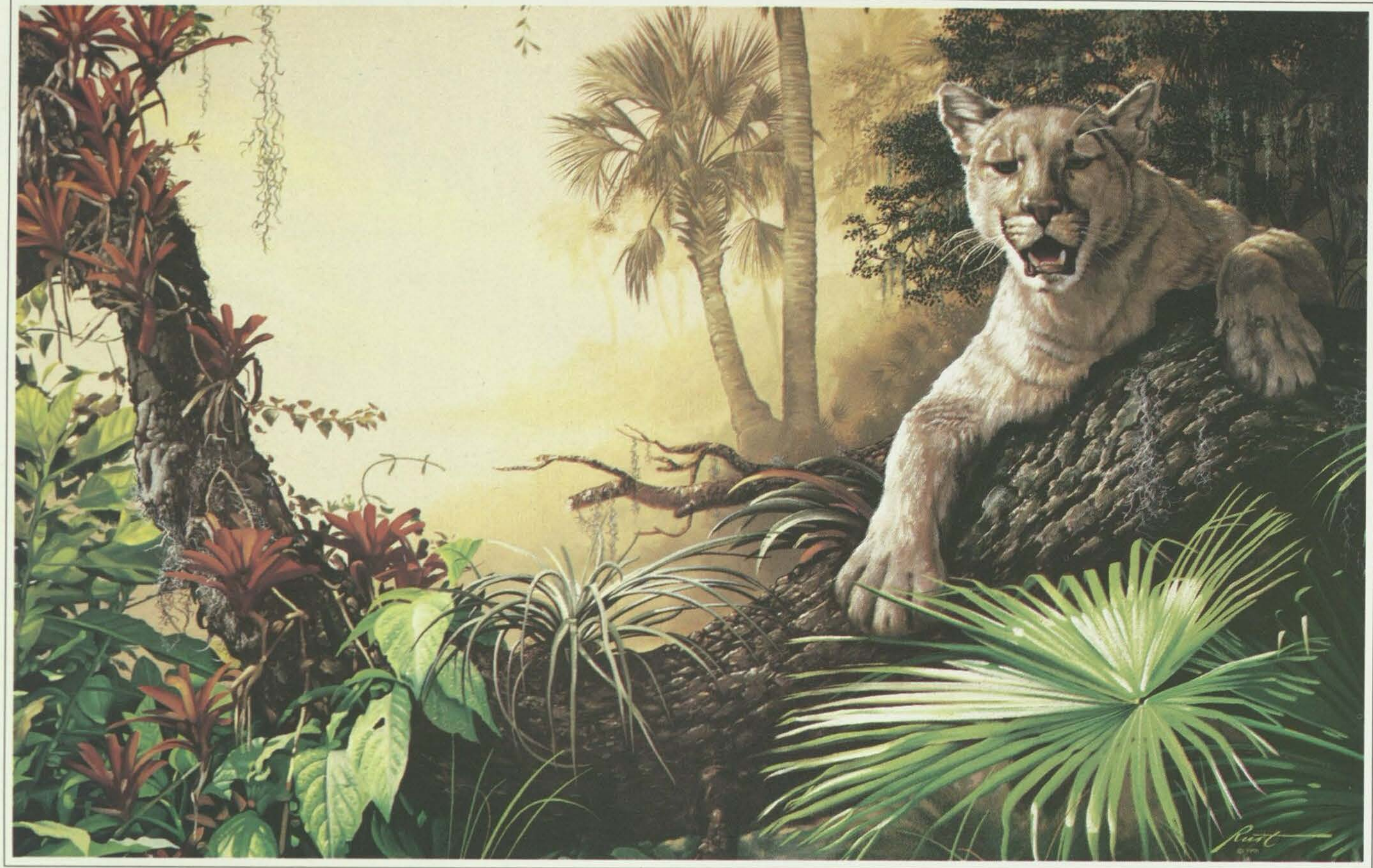

Image size: 17" wide by 10 ¾" high. Limited edition of 1,000 signed and numbered prints.

1993 Cover Art Winner

Donald "Rusty" Rust's dramatic rendition of the endangered Florida panther is the winner of this year's cover art competition. FLORIDA WILDLIFE is pleased to offer reproduction art prints of his striking oil painting. By purchasing subscriptions to our magazine, you help us spread the conservation message. And, you get this exclusive wildlife art print, free as our thanks to you.

We have selected some of the entries from this year's competition to feature on the following pages. Although we cannot offer art prints by these artists, we hope that their creative efforts will enhance your appreciation of wildlife art and Florida's diverse wildlife populations. ▷

1993 Cover Art Contest Winner

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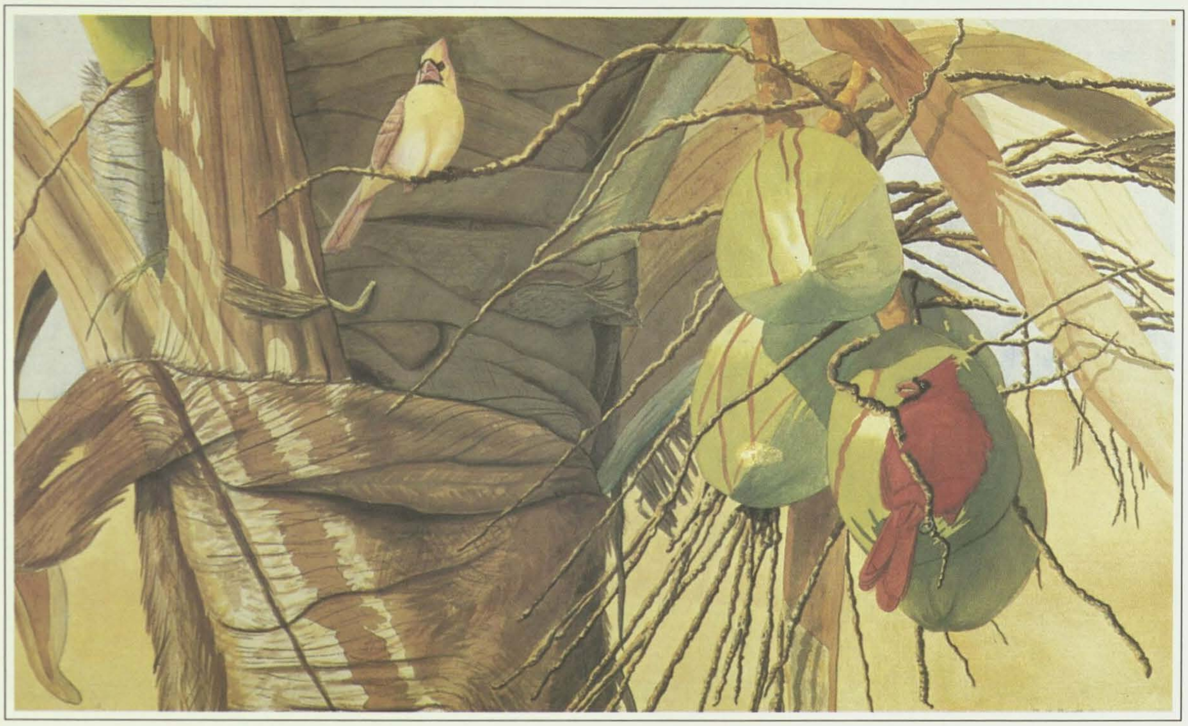
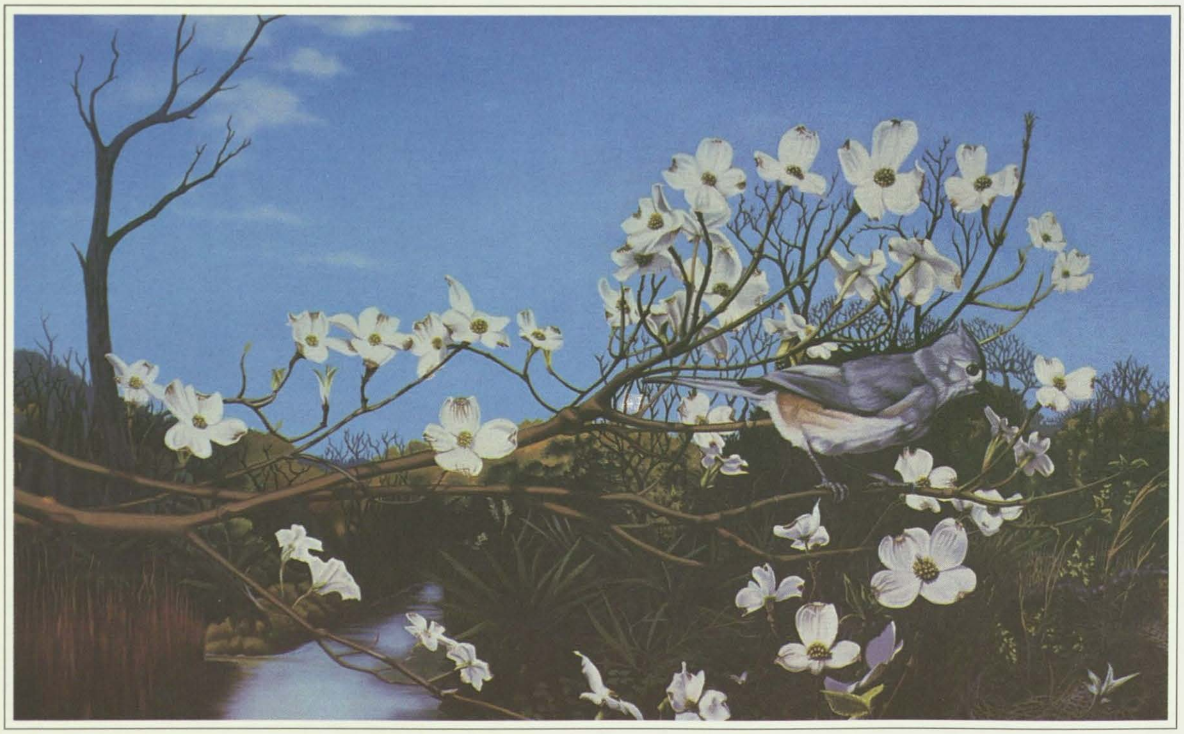
1993 Cover Art Contest

The following artists were finalists in this year's competition.



CARDINALS AND COCONUTS *by Bill Scott*

TITMOUSE AND DOGWOOD *by Sheila Towne*



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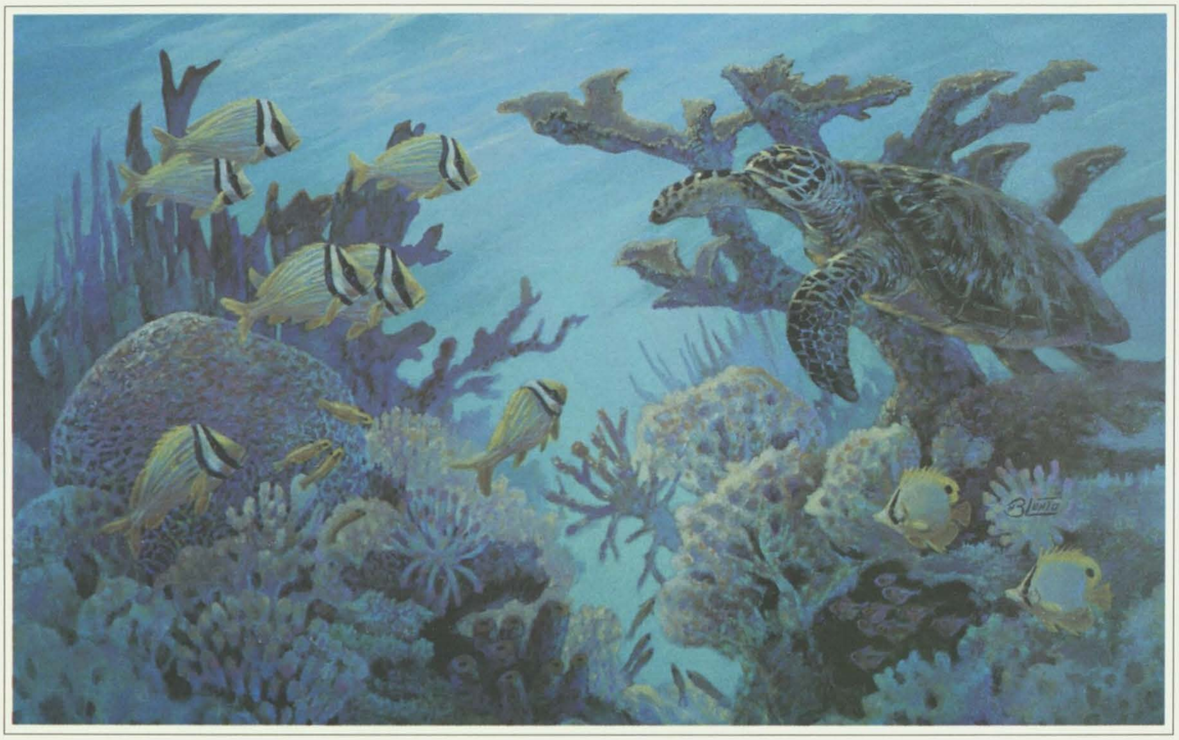
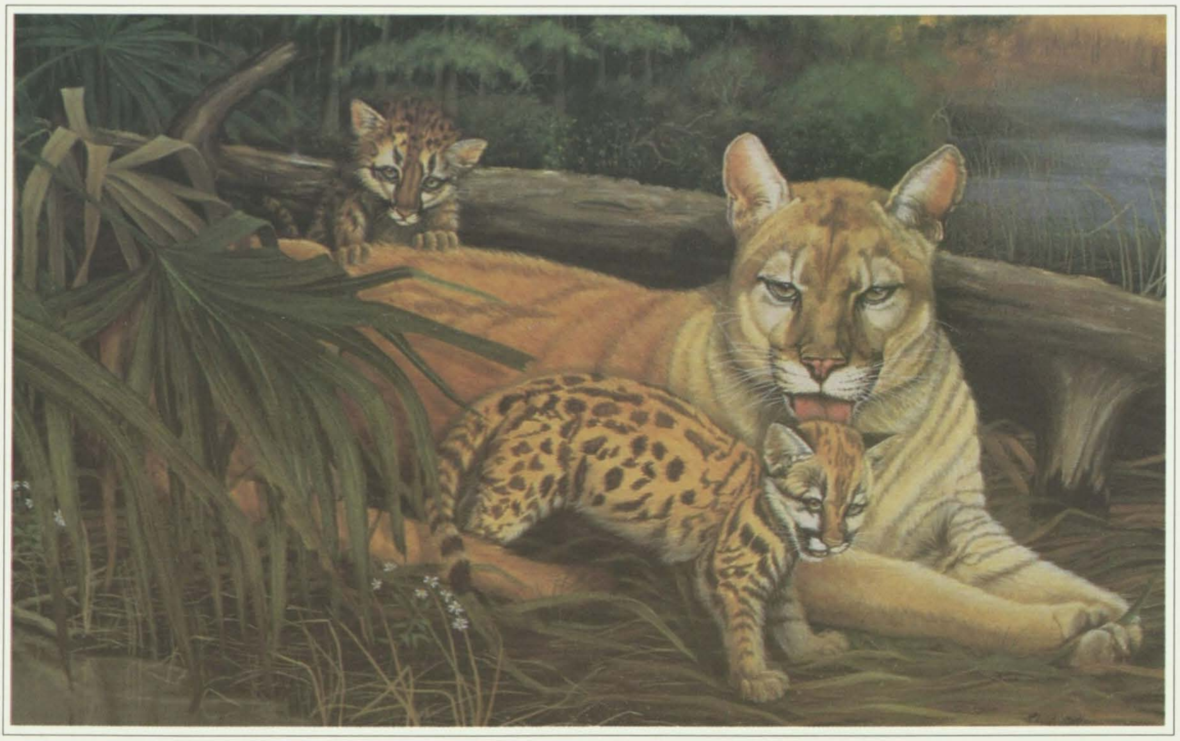
1993 Cover Art Contest



HAWKSBILL TURTLE, FLORIDA REEF by Helen B. Lehto

NEW BEGINNINGS (Florida panthers) by Christi Mathews



1993 Cover Art Contest

SQUIRRELS *by James R. Ashley*

MOORHENS *by Bill Scott*

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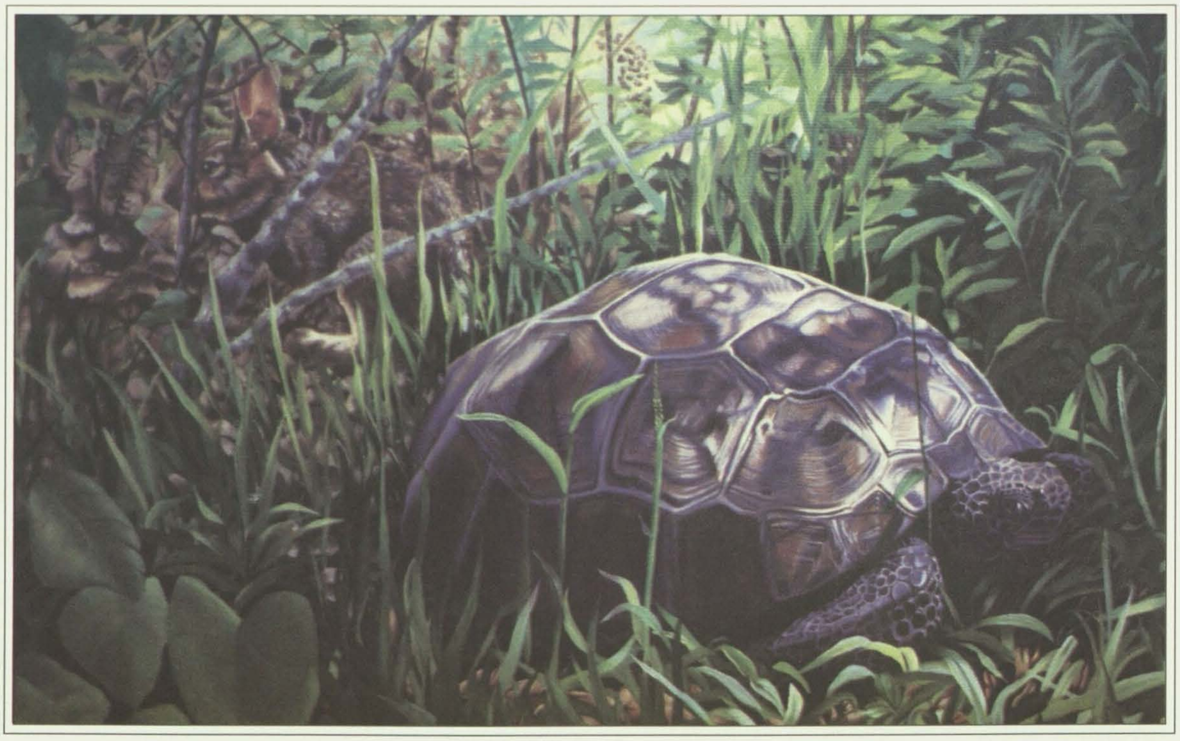
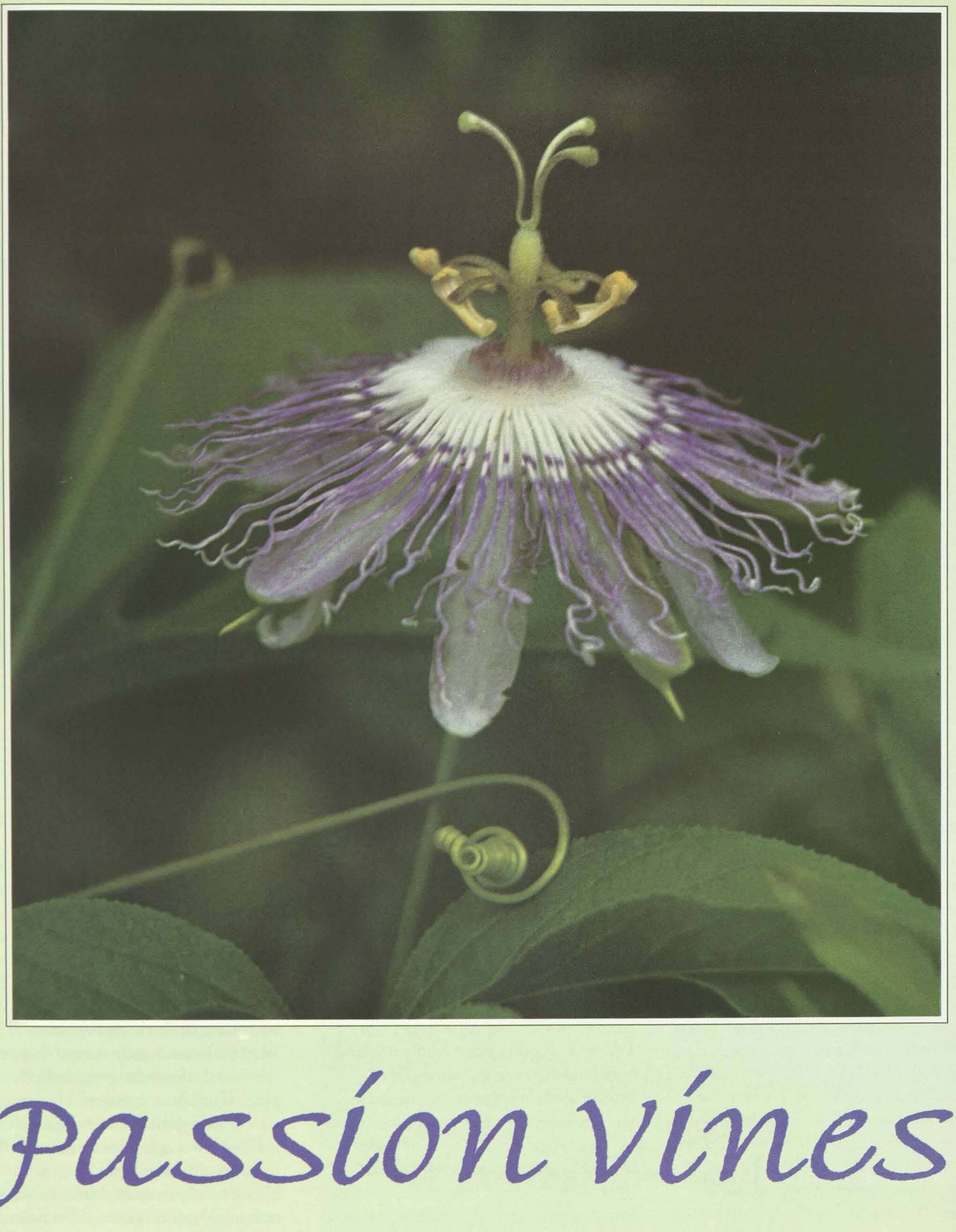
1993 Cover Art Contest

PINE BARRENS TREE FROG *by Cira Cosentino*

TORTOISE AND HARE *by Sheila Towne*



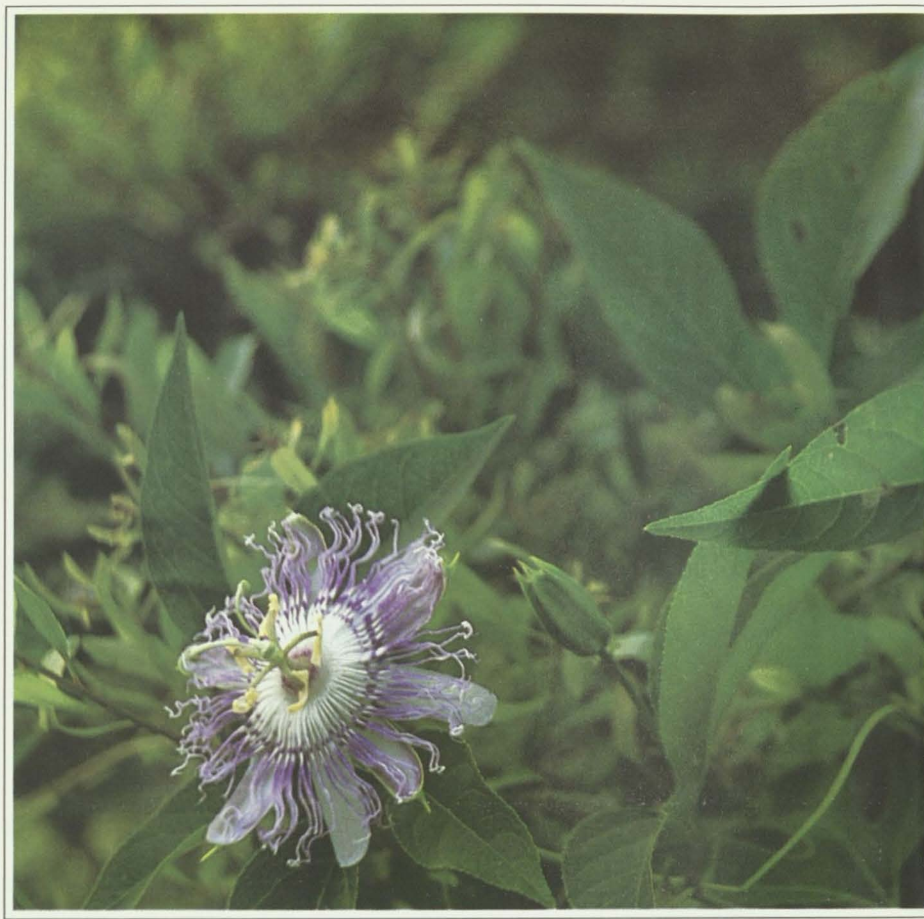


Passion Vines

Text and Photographs by Michael Wisenbaker

As we biked over a dike crossing the broad coastal marshes of the St. Marks Wildlife Refuge in Florida's Big Bend, lush seas of rushes and grasses gave way to piney woods and cabbage palm hammocks. In a state where natural areas constantly fall prey to roads, houses and shopping centers, this slice of the Florida Trail always revives one's spirit.

After about an hour's ride, we found a patch of showy wildflowers that had erupted into bloom on a remote part of this trail. We thought it would be an ideal spot to pause and reflect on our enticing surroundings. Ospreys filled the sky with high-pitched chirps while tending their nest high atop a gnarled, dead pine. Bees and butterflies swarmed the purple blossoms that enveloped us. A ruby-throated hummingbird flitted from one bloom to another as he gorged on the tasty nectar. Many of these creatures had been lured here by the comely passion vine (*Passiflora incarnata*).



***Passiflora** are opportunistic plants. This herb uses a wax myrtle for a trellis.*

Early Written Accounts

The first written accounts of this ornate herb came from Jesuits who accompanied the Spanish conquistadors to the New World. They viewed the plant as a symbol of faith and piety. But Native Americans had used these plants long before the Spanish arrived. Remains of their fruit, maypops – so named because of the sound they make when opened – have been found in archaeological sites throughout Florida and the Southeast.

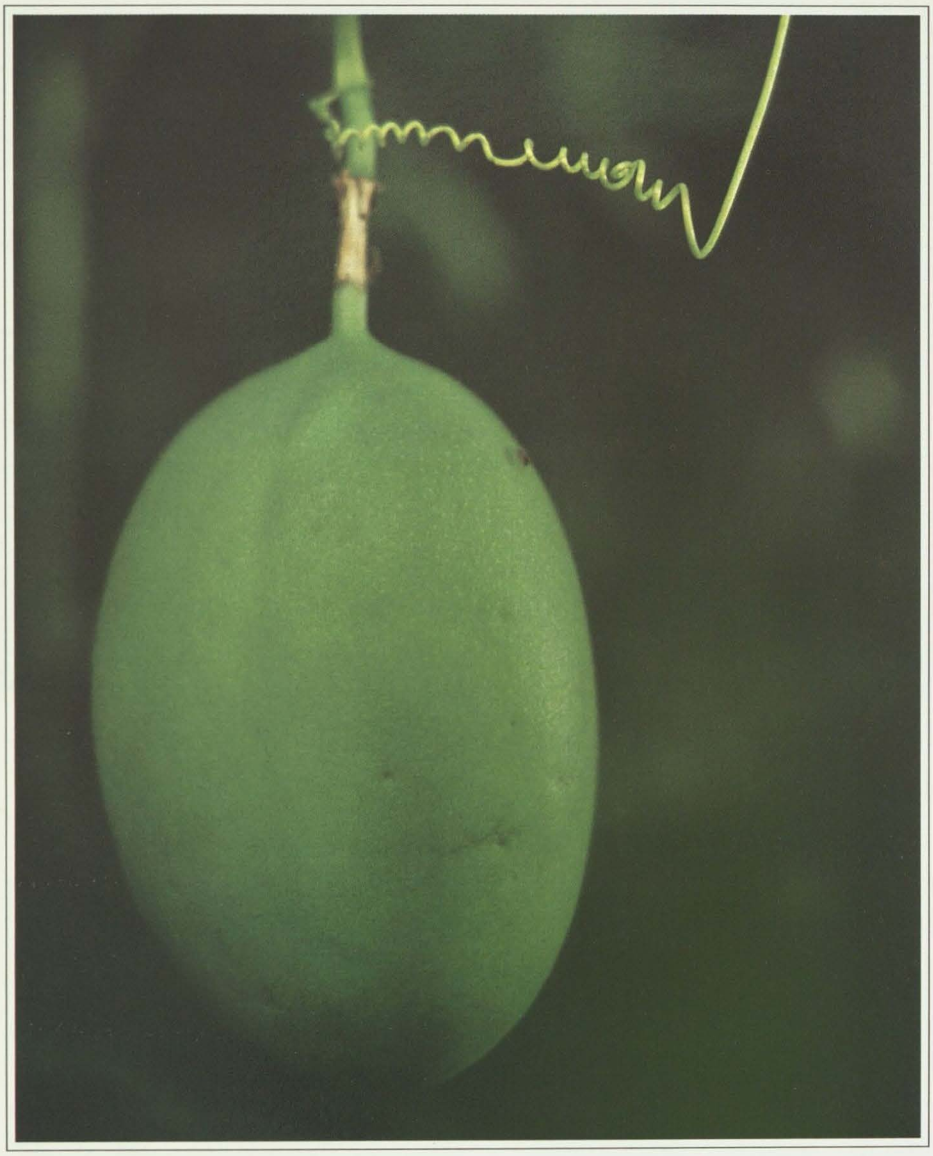
According to Ms. Lee Newsom, an archaeobotanist with the Florida Museum of Natural History, maypop seeds from the Windover site near Titusville date to the Archaic period, about 7,500 years ago. Passion flower parts also have been found at sites such as Hontoon Island on the St. Johns River and Lake Jackson near Tallahassee. Seeds became more common at later sites, since Indians had to clear vast areas for their crops and villages. We don't know if they planted maypops, but we do know they ate the fruits and used other parts of the plant for medicine. Later, American colonists also benefitted from this vine. They gathered its purple and white blossoms in late spring and summer and savored its pleasant aroma.

About 12 genera and 600 species (only 400 of which have been named) comprise the mainly tropical American family to which the maypop belongs. Probably no other plant family boasts as many fruiting species. One South American variety known as the giant granadilla bears fruits that weigh as much as 6 pounds and grow to 12 inches long.

Our region's passion vine spreads over sandy thickets, open fields, vacant lots, ditches and road shoulders. It ranges as far north as Pennsylvania and as far west as Missouri. The plant dies back during the winter and suckers the next spring. Some growers cross maypops with tropical species to create more cold-tolerant hybrids. Fruits and juices from various passion flowers are sold commercially in Latin America and Australia.

Early settlers crushed maypop roots for making sedatives to relieve insomnia. Later, people began using passion vine extract to treat a host of maladies such as diarrhea, epilepsy, tetanus, convulsions, menstrual cramps, neuralgia and problems related to menopause. The treatments must have worked, because many of these ailments cause muscle spasms that can be relieved by drugs extracted from this plant. The name "passion" even prompted a few lovelorn folks to employ the maypop as an aphrodisiac. In Latin America, passion flower seeds are ground in a blender and placed in drinks for seductions. Today, Europeans suffering from neuroses often calm themselves with mild tranquilizers derived from dried passion flower leaves.

Except for the fleshy interior of the fully ripe fruit, all parts of all *Passiflora* are poisonous. This plant contains alkaloids



and other ingredients that act as a motor depressant in sedatives and antispasmodics, according to Dr. Kevin C. Spencer, head of food and biochemical research at American Air Liquide in Chicago. Its compounds, unfortunately, also release cyanide, which can kill people and animals such as cattle, although the latter seldom find enough leaves to get a lethal dose. Some of our native mammals seem to relish eating these succulent forbs without suffering any ill effects. Dried parts are used for medicine and contain much less cyanide than living plants.

Some refer to the passion vine as an apricot vine, based on the fruit's similarity to an apricot. Others say it even tastes like a tart apricot. The round berry, about the size of a large hen's egg, turns yellow when it ripens in late summer or fall. But it would be wise to consult an expert before eating any part of this plant. If you wish to eat one, be sure you've chosen a ripe fruit. One wild-edible field guide says that fruits ▷

American colonists called passion vines "maypops" because of the sound made when opening the fruit.

can be eaten as is or used to make cold drinks. Another book notes that the fruit is more eatable than edible. John Muir, an eminent 19th century naturalist, described the apricot vines he found in Georgia as having "a superb flower, and the most delicious fruit I've ever eaten." Latin American species of passion flower apparently make better drinks and jellies than our variety.

A dozen or so years ago, an archeological crew testing sites along the Natchez Trace Parkway in north Mississippi found yet another use for maypops. While toiling in an oven disguised as a soybean field, shoveling and screening dirt at the site gave way to the War of the Maypops. Even the most staid workers, under the influence of the molten sun, briefly reverted to their youth as they engaged in mock battle with green grenades.

Vital Food Source For Butterflies

Passion vines go far beyond meeting mankind's needs alone. They play a vital role in the life cycles of certain animals – particularly heliconia butterflies. Gulf fritillaries, zebra longwings and julias (or flambeaus) lay their eggs on these vines, which are the sole food source for their caterpillars. Gulf fritillaries range throughout the state, while zebra longwings stay mostly within the peninsula, and julias occur only in Dade and Monroe counties – primarily the Florida Keys. Hungry larvae can consume much of a plant's leaves in a single day but are unsavory to birds because of the cyanide they absorb. Caterpillars, however, have evolved special enzymes to protect themselves from the toxic passion vine. Although butterflies, other insects and hummingbirds seek nectar from maypop blossoms, a recent study of maypops at Paynes Prairie suggests that only carpenter bees at that site actually pollinated the plants.

While maypops grow throughout the state, Butterfly World near Fort Lauderdale holds one of the world's largest collections of various species of passion vines. It keeps these and assorted other plants to meet the needs of its great global menagerie of Lepidoptera. Butterfly World even maintains a botanical vine walk, and it also just formed an International Passiflora Society.

While many of today's life-forms struggle to survive, the seemingly fragile passion vine thrives. To know that this fascinating vine has flourished because of its long and colorful history with mankind is heartening. No one ever should mistake this hardy southern native for a shrinking violet.

How The Jesuits Saw Passion Vines

When the Jesuits accompanying the conquistadors to the New World first saw the passion vine growing in the sandy coastal plains, they christened it "flora de los cinco llagos," – flower of the five wounds. Three hundred years earlier, St. Francis of Assisi had a vision of a flower symbolizing the cross. Perhaps the Jesuits felt this was the flower of that vision.

They saw the sum of the flower's five petals and five sepals as the 10 faithful apostles. They believed the reddish fringes of its bloom depicted either the blood-stained crown or the whips used to flog Christ. Its five upright stamens represented His wounds; the three knob-like stigmas symbolized the nails that held Him to the cross, and the lobed leaves favored His tormentors' hands. When priests saw Native Americans eating passion flower fruits, they believed it was a sign of their hunger for Christianity.

Michael Wisenbaker is a preservation planner for the Division of Historical Resources, archeologist and free-lance writer.

Gulf fritillary butterflies lay their eggs exclusively on ***Passiflora incarnata****, since it is the only plant their larvae can live on.*

The Encounter

Text and Photographs by Bob Paty

It was a cool morning following a cold night. The sun was still low as its rays shadow-danced across the rippled surface of the water at Merritt Island National Wildlife Refuge.

Two river otters were swimming, diving and playing in a pond created when dirt was excavated for a road. Occasionally one of the otters would catch a fish and carry it to the edge of the pond. Holding the fish in its two front paws, the otter would eat its meal, then rejoin its playmate. The two were young animals, perhaps the result of the previous year's breeding. There was a strong bond between them; they probably were siblings.

As they swam, dived and played in the pond, I couldn't help but feel that otters frolic in the water for sheer enjoyment and that fishing is sometimes secondary to their play. As if on cue, both animals would leave the water periodically for a short romp on the sandy slope of the pond's edge. This too was something they enjoyed, and they would emit squeals of otter-like conversation.

The otters stopped their activity, alerted to something they could sense, but not see.

As they continued their play and fishing, I noticed movement in the shadows at the edge of the pond. In the faint light an image appeared in the form and shape of a cat. A bobcat had responded to the sounds of the otters. Its attention was fixed in their direction as they returned to the water to resume their light-hearted play. As the bobcat continued to move forward to the edge of the pond, it was bathed in the early-morning light. The cat was a young male, apparently fully grown. He was in splendid condition, with thick fur and beautiful markings. Its feet and legs were stocky, and he was not cut or scarred on his face or ears like other wild Florida bobcats I've seen.

As quickly as the bobcat had appeared, it disappeared, in a ghost-like way. The otters stopped their activity, alerted to something they could sense, but could not see. They approached the pond's edge with caution, then abruptly turned and retreated to the security of the deeper water.

The bobcat returned to the edge of the pond, some 20 yards farther down, directly across from the otters. From the safety of the deeper water, the otters approached the bobcat, then retreated. ▷

Cautious at first, each approach drew them closer to the predator. Finally, when one of the otters was about 10 feet from the bobcat, it stood up until one-third of its torso was out of the water. The otter was taunting the bobcat!

Whether it was catlike curiosity or predatory instinct that brought the bobcat to the otters didn't matter; he remained persistent in his attempt to reach them. Had it come to a showdown between the otters and the bobcat, this whole situation could have ended in a heartbeat. But as long as each remained in its respective element, things would continue without incident. Otters cannot be underestimated when it comes to a scrap, especially when they are in the water. Their body fat and thick fur protect them from injury, as well as from the cold water. Out of the water they are more vulnerable, but their sharp teeth and strong jaws can inflict a serious wound.

The bobcat seemed satisfied not to push the issue and kept a respectable distance. He probably out-weighed the otters by 10 pounds but was outnumbered.

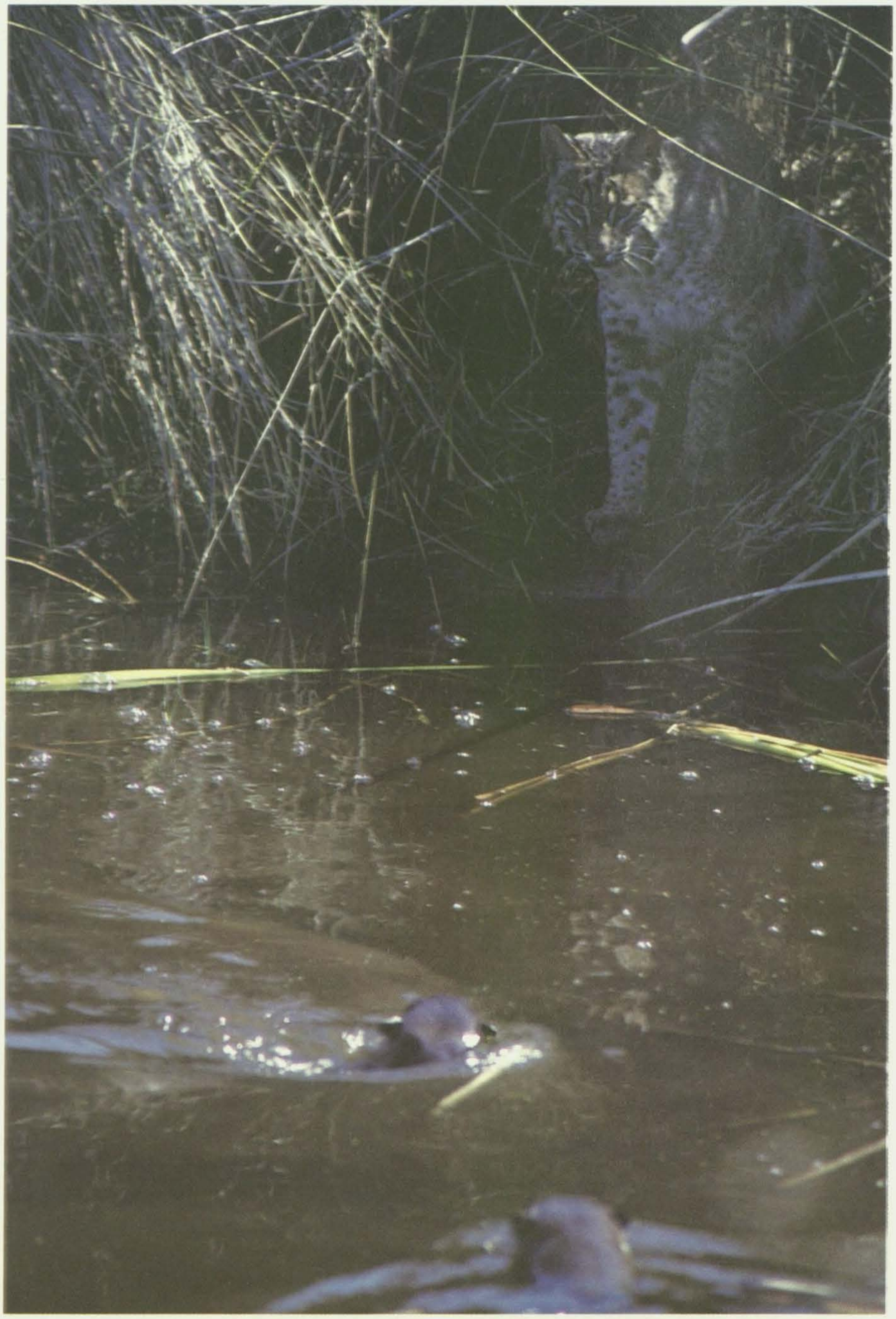
The otters moved across the pond where they left the protection of the water again to romp on the shore. When the bobcat reappeared, this time on the steep, opposite shore, the otters returned to the water. As the bobcat stopped just short of the water, he had to use his back legs as brakes to prevent a head-first splash. He then folded his back legs under and sat back on his haunches. He remained in this pose for several minutes gazing out over the water, looking like a monarch on his throne.

The otters moved farther down the pond, but not as far as before. His highness, the bobcat, moved again and took up his customary place on the pond's edge. Now the otters approached even closer. The bobcat started into the water but, finding it too deep to wade, he chose not to swim and so let discretion be the better part of valor. He backed partly out of the water and used his left paw to make a furious swipe at the otters, which were several feet away. This sent up a small geyser of water – the climax of his frustration. He backed completely out of the pond and lay down on a flatter place on the shore. He licked his wet fur and rolled about on his back, much like a domestic cat.

In a few moments the bobcat gathered himself up and ambled back into the brush. The otters, too, had their curtain call. They crossed the road, entered an adjoining canal and were gone. The show was over.

What a show it had been, this amazing encounter between two river otters and a bobcat. It had lasted over an hour and a half, without any direct contact between the adversaries. I'll never forget my ringside view of this wildlife show. ◆

Bob Paty is a free-lance photographer who experienced this encounter at Merritt Island National Wildlife Refuge.



Camping With Your Kids

Text and Photographs by Carolee Boyles-Sprenkel

"Coon! Pet it!" my 2½-year-old son, Christopher, exclaimed happily, pointing.

A raccoon had come to beg leftovers at our campsite. For a little boy on his first camping trip, the masked moocher was a delight. I explained that we couldn't pet the raccoon because it was a wild animal, and we watched it poke around outside our camper for more than an hour.

Before my husband, Dick, and I married, we tent-camped a good bit. Most of our trips involved bluegrass festivals, but we visited a few state parks, too. Then we started building a house ourselves, and for several years put aside camping in favor of driving nails.

Just after we moved into our new house, we took one memorable trip to Unicoi State Park in Georgia, when the predicted low of 45 degrees turned into two 28-degree nights. Despite the unforeseen weather, we made plans for more trips. Then circumstances, in the form of a small boy, intervened. The social worker from our local adoption agency called and announced, "It's a boy!" Suddenly we were parents, struggling with 4 a.m. feedings and a mountain of dirty diapers. Camping got set aside again.

By the time Christopher reached age 2, we were starting to think once more about camping. Somehow I hadn't the courage to take him tent-camping. But when I had an opportunity to borrow a brand-new Jayco pop-up camper, Dick and I decided this was our best opportunity. We each took a deep breath and committed ourselves to a four-day camping trip.

We were astonished at how easy it was. Since Christopher loves to be outside, he was about as cooperative as a little boy can be. He took long naps, slept all night without a sound, and generally made life easy on Mom and Dad.

The key to our successful trip was careful planning. We thought through every phase of what we were about to do and listed what we would need to take, not only for the camping trip itself, but to keep Christopher happy as well.

Based on our camping experiences, I've put together what I call "Eight Tips To Surviving a Camping Trip With a Small Child." In no particular order:

1) Don't go very far. Our longest travel time between stops is three hours. Since kids are notorious for becoming bored, and Christopher is no exception, we try to do our traveling while he takes his afternoon nap.

2) Keep your trip short – perhaps just a weekend. Our first camping trip with Christopher was four days. One more day would have been all right, but six would have been stretching things.

3) Let the weather dictate when you go. Obviously, very hot or very cold weather can make small children uncomfortable, and when they're uncomfortable, they complain. Loudly. All the time. But think, too, about other weather factors. We once camped three days in the rain – ▷

not much fun any time, but the pits with a small child. We should have waited and gone the next week, even if it meant rearranging our schedules.

4) Stay where there are showers and bathrooms, at least for the first trips. This is not to say I wouldn't take small children primitive camping, but they sure are easier to manage when you can take them into the shower with you. And from a mother's standpoint, I'd rather camp where I know the bathrooms are clean. Some of them can get pretty slimy, and little kids have a tendency to sit down at the darndest times.

5) Don't try to do too much in one trip. Our first camping trip covered three state parks in four days because I was on a writing assignment. In retrospect, though, I'd pick a less pressured situation for our first attempt.

6) Be sure there's something for children to do where you go. This need not be anything elaborate. Short nature (not long hiking) trails, a swing set or a playground will catch a child's attention.

7) Schedule the big people's activities around nap time. Don't plan to hike after lunch if that's when the little guy or girl sleeps. You'll have a whiny child and a miserable time. Go early in the day when everyone is fresh. Then you'll have a chance to take a long nap yourself while your child sleeps off the morning's activity.

8) Plan what you need to take. Depending on the age of your child, you may want to carry a portable crib, a guard rail for the bed, a portable potty, an infant backpack or chest carrier, a stroller, a playpen and a portable seat that clamps onto a table. I guarantee that you will need extra diapers and about twice as many kids' clothes as you think you will use. Little kids get dirty and wet outside in a heartbeat anyway; taking them camping raises that potential by a factor of 10. And don't forget sunscreen and a hat.

Above all, don't be intimidated by the idea of taking your child camping with you, no matter how young. It can be done. It takes careful planning, but any kind of camping does. Just think ahead about what you'll need, and go for it.

One other thing to remember: take the camera and plenty of film. At one of the state parks where we stayed, a wildlife rehabilitation center had just released a small buck. I have photos of Dick crouched down beside Christopher while the little deer gently noses them both. The look on Christopher's face clearly says, "Don't get so close! You tickle!" That expression was worth the whole trip.

Carolee Boyles-Sprenkel is a free-lance writer and mother of one little camper.

Searching For Truth In Dead Lake Country

Text and Photographs by Carolee Boyles-Sprenkel

Sunrise was a future memory as I headed west on S.R. 20. Behind me, Tallahassee's lights smudged the horizon with a burnt-copper glow; ahead, a predawn lightning storm silhouetted thunderheads against the stars.

For the past couple of years I'd been hearing contradictory rumors about Dead Lake. The fishing was great. The fishing was hopeless. The Water Management District removed the dam to restore the fisheries. The District ruined the lake when it removed the dam.

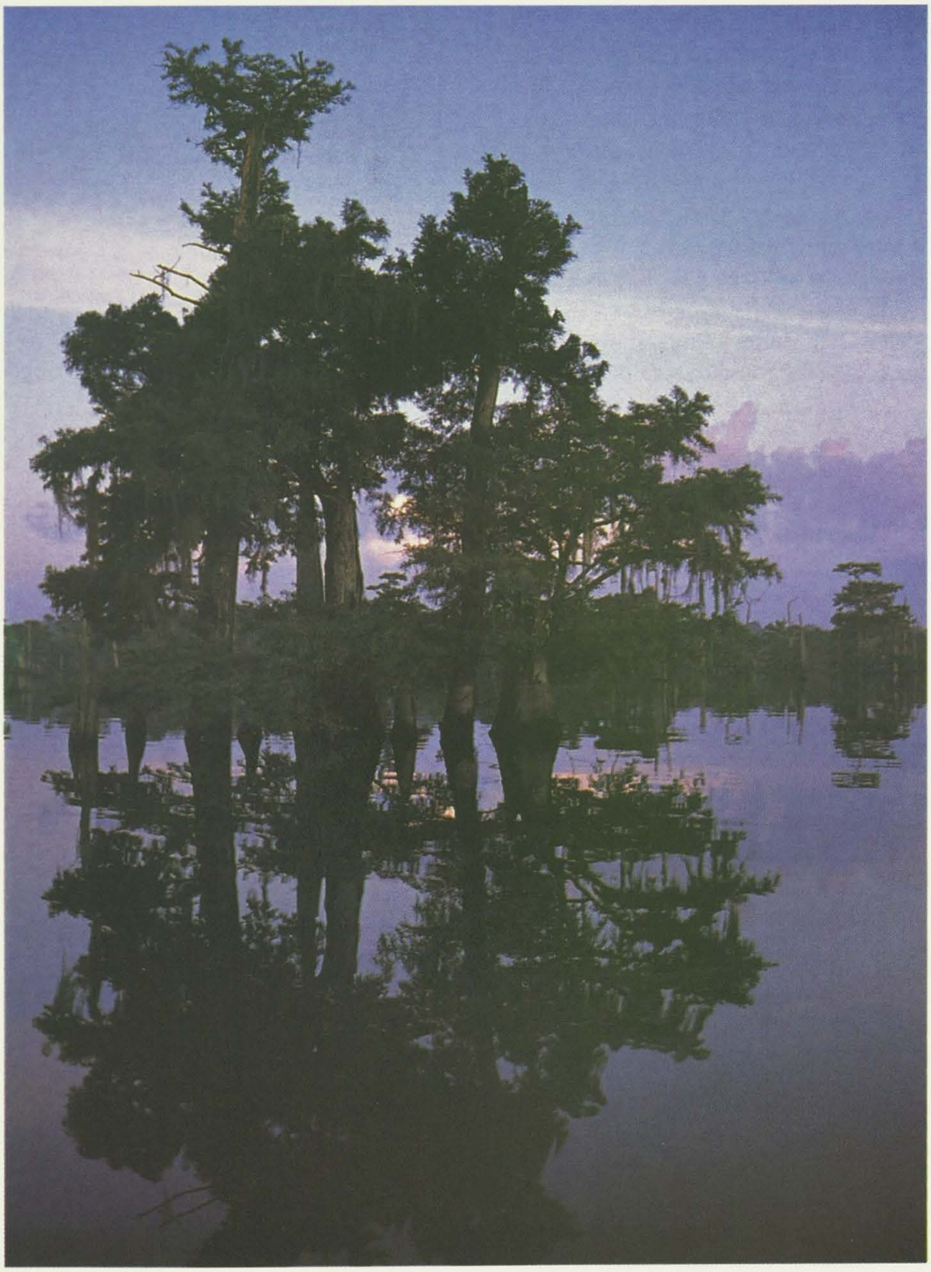
I was going to check it out. Local fisherman Andy Amann, who's fished on Dead Lake since he was a child, was taking me there so I could see for myself what all the controversy these past few years has been about.

By 5:30 a.m., we were launching Amann's boat and heading down a canal into the lake. The sun was still 30 minutes or more from rising, but the lake already shimmered with mother-of-pearl colors.

Once he cut the big motor we each tied on a medium-sized gold Rapala and began casting around the huge dead cypress stumps that dot the lake. We fished quietly, listening to the birds and the occasional splash of frog or fish. Then I hung into something that felt like I was pulling on a log.

I was. A limb the size of my forearm trailed dead vegetation. About that time, a geyser erupted in front of the boat. Amann worked the fish to the side of the boat.

"Not much size; we'll release it." ▷



We fished on. Then Amann tied into another one. This was a bigger fish, about 3 pounds. He kissed this one right on the nose before he released it.

"You see 'em on TV with one like this, and they call it a 5-pounder," he quipped.

Dead Lake is pretty in the early morning. The light comes in from the east all opalescent pink and orange. The water is so glassy-calm that the sunrise reflects back to the sky in perfect detail. In the midst of all this light, the dead cypresses stand as black and still as stone monoliths on Easter Island. It's an eerie sort of beauty, one entirely different from sunrise on most other lakes.

But beneath all this charm lies danger. Only the foolhardy, or those who are extremely familiar with Dead Lake, move faster than idle speed. Stumps lie just below the water's surface that rival any of those visible above. To run across this lake is to court catastrophe.

Technically, Dead Lake is not a lake in the common sense of the word. It's really just a wide place in the Chipola River, what biologists call a cypress lowhead. In times of drought, the only water is in the river itself, and the Dead Lake portion of the floodplain is dry. During high water, the river spreads out to fill the floodplain, creating the lake.

Dead Lake's water level is directly related to the amount of water in the Apalachicola River. At the confluence of the Chipola River and the Apalachicola, the larger river acts as a barrier to the Chipola. When the Apalachicola is high, it retards the flow of water from the Chipola, backing up the river and keeping Dead Lake filled.

During the early 1950s, a series of upstream dams was built on the Apalachicola/Chattahoochee/Flint river system. The dam immediately above the Chipola-Apalachicola confluence is the Jim Woodruff, which created Lake Seminole. When the Corps of Engineers closed the floodgates on the Woodruff dam at Chattahoochee, the downstream flow in the Apalachicola was severely reduced.

At the same time, north Florida experienced one of its periodic droughts. The two events combined to lower the water level in Dead Lake drastically.

In 1957 Cecil G. Costin Jr., a state representative from Port St. Joe, introduced a bill to create and establish a Dead Lakes Water Management District. (The word "lakes" was plural, despite the fact that there is only one lake.) The long and short of it was that the District was to build a dam across the Chipola to maintain a constant water level in the lake.

Some say removing the dam at Dead Lake ruined the fishing. Biologists say the long-term health of the lake will improve.

In 1960, the District completed an interlocking sheet pile dam across the river just below S.R. 22A at Wewahitchka. The dam had drawdown capabilities to manipulate the water level, but that portion of the structure failed and had to be replaced two years later.

Within a few years, some fish camp operators began complaining about a decline in bass and other sport fish populations. Aquatic weeds, including water hyacinths and Brazilian elodea, flourished in the lake. Biologists noted the buildup of silt on the bottom, which depressed oxygen levels and interfered with fish reproduction.

In 1974, the Dead Lakes Water Management District, the Game and Fresh Water Fish Commission and the Department of Natural Resources (DNR) worked together to improve drawdown capability by building a set of gates in the dam.

DNR then tried to put a drawdown plan into effect. Each July for the next four years they would open the gates to draw the lake down nine feet, then reflood it the following January.

In 1974, the water level dropped about three feet. During 1977, it fell about two feet. The other two years, biologists saw little or no drop in the water level of the lake.

The problem appeared to be twofold. First, the level of the Apalachicola must be low for drainage of the lake to take place. This will happen only during periods of very low rainfall, because if the water level drops enough to drain the lake, it will be too low to maintain barge traffic on the river. The second problem was the gates themselves: they simply weren't large enough to allow sufficient water flow to drain the lake.

By the early 1980s, the tide of public opinion, at least in some quarters, had turned against the dam. The Northwest Florida Water Management District (NWFWMD), in cooperation with the Commission and DNR, held a series of public hearings about the future of the dam. Reaction from local interests was loud and opinionated, and often threat-

Dead Lake actually is just a wide place in the river, what biologists call a "cypress lowhead."

ened to spill over into violence. One Commission biologist recalled being nervous about attending night meetings in Wewahitchka, especially when he'd overheard talk of collecting money to dynamite the dam.

In October 1981, someone took matters into their own hands. Vandals opened all four gates and damaged the mechanisms on two of them to prevent their closure. A few nights later, someone else closed the two undamaged gates and took apart the valve housings on the two damaged ones so they would close.

Soon after the vandalism, then-Gov. Bob Graham replaced all the directors of the Dead Lakes Water Management District. One of the first actions by the new board was to remove the gates so the water level would drop.

More than 70 percent of voters in a local referendum opted to remove the dam. The 1984 Florida Legislature transferred management of the lake to the NWFWMD and directed the District to remove the dam. The District removed the sheet pile structure in December 1987, leaving behind the rocks that had been piled behind the dam. In February 1989, following a drought during which the rocks retained water in Dead Lake, NWFWMD removed 20 percent of them, too. After 29 years, the Chipola River was a free-flowing stream again.

Despite overwhelming electorate support to remove the dam, not everyone is happy. Amann pointed out that only Gulf County residents were allowed to vote on the referendum to remove the dam. Many of the landowners on Dead Lake, however, live in other counties, even Georgia and Alabama. He contends that if all the waterfront property owners had been able to vote, the result would have been quite different.

And he's unhappy with changes in the lake since the removal of the dam. He pointed to the myriad stands of willow and young cypress that clog some areas of the lake.

"That's squeezing the life out of the lake," he believes. "See these willows? They won't sprout unless it's dry. It never was dry here before. I'm 61 years old, and I've never seen it until now. Those willows will come up, and instead of having a beautiful lake to fish in, it'll be so jam-up with weeds and stuff you can't go."

Both my guide and Monroe Sullivan, a local property owner and fisherman, talked of a time, soon after the dam went in, that they could catch enough bluegill and shellcracker to fill a washtub. That kind of fishing doesn't exist on Dead Lake anymore, they said. (But then, it's hard to find that kind of fishing anywhere today.)

While fishermen and landowners continue to disagree about Dead Lake, Commission biologists, charged with documenting changes in the fisheries on the lake, quietly go about their research. While they haven't reached any definite conclusions yet, what they're finding indicates that removal of the dam may have some very beneficial long-term effects.

Biologists say when the river and lake fluctuated normally in the past, stands of willow and cypress often germinated in areas that dried out for a period of time.

"When the water level was stabilized back in the '60s, all the terrestrial vegetation that could grow only in shallow water or tolerate submersion for short periods died out," said Commission fisheries biologist Michael Hill, who began studying the lake before the dam's removal.

In fact, Dead Lake would not have looked the way it did in the 1950s were it ▷

not for mankind. Sometime before 1900, loggers girdled many of the huge cypress trees that grew in the lake, killing them. In a later dry period, loggers went back into the area and removed the trees, leaving the snags and stumps from which the lake takes its name. Without dry periods during which young cypresses could germinate to replace those logged trees, Dead Lake would be almost devoid of live cypresses.

Some years prior to the removal of the dam, dissolved oxygen levels and aquatic vegetation in the lake declined significantly. There was no oxygen below three to four feet, limiting the area for fish habitation. All the eel grass, Brazilian elodea and coontail disappeared. Now that the dam has been removed, it may take some time for the submersed vegetation to become re-established, but oxygen has returned throughout the water column. As a result, the patches of willow and cutgrass now present on the lake are functioning as nursery areas for sport fishes, including largemouth bass.

The live cypress trees that dot Dead Lake germinate during dry periods.

Hill said one of the species most affected by removal of the dam probably will be striped bass. Though no one documented striped bass reproduction in the Chipola River back in the 1950s, they did spawn in the Apalachicola prior to construction of the dams there.

"The decline of striped bass in the Apalachicola is tied directly to construction of the Woodruff Dam and the other dams on the system," he said. "In late winter and spring when the stripers make their spawning run, they go up as far as they can. Several males attend a single female. The eggs are spewed out and tumble down the river. But if the river gets shortened like the Apalachicola has, the eggs don't hatch until they reach the coast. Unfortunately, coastal habitat is not suitable for the fry. That's one of the reasons we feel the reproduction of stripers is limited. Plus, dams prevent stripers from moving to thermal refuges in the summer."

Hill sees evidence that stripers are returning to old haunts up the Chipola.

"The Gulf Coast striped bass in the river system require springs – cold-water thermal refuges – to survive the summer," he said. "The upper Chipola has cool water temperatures almost year round. Old-timers we talked to told us they could see 30- to 50-pound striped bass that would just kind of hang out in those springs. We wanted to see the dam removed so that after the stripers had made their spawning run up the Apalachicola, they would run back down to Wewahitchka and then upstream to the Chipola springs."

Commission biologists are conducting a research project in the Chipola's cool-water springs. They're finding big striped bass in areas where they weren't when the dam was in. And as far as other species of fish are concerned, Hill said, they're doing quite well.

"I expect an improved fishery out there in the next few years," Hill said. "Sport fish have spawned successfully, and there's a very large year class of sunfishes and largemouth bass."

Local fishermen may indeed be seeing low catches of fish now, due to a peculiarity of 1991's high water. Terrestrial vegetation that grew during the drought of 1990 has died and is now decomposing in the water. Decaying terrestrial vegetation reduces the amount of dissolved oxygen available to fish, so they moved elsewhere.

"Low oxygen and a lack of submersed aquatic vegetation is affecting the number of fish," Hill said. "There aren't as many as there otherwise would be. This will change and will not be an annual event. The fish have moved just for now."

So who's right? Has removal of the dam adversely affected Dead Lake, as some local fishermen contend? Or will the changes biologists are following improve the long-term health of the entire system?

Dead Lake is as it is because loggers went in more than a century ago and removed the massive cypresses whose stumps remain. Viewed from that perspective, the changes taking place now – the germination of young trees, improved oxygen levels, the return of stripers to the springs, even the cutting of timber – are all just part of the long-term cycle of the lake.

Either way, the dam's removal is a done deal. What remains now is to see if Dead Lake heals itself and the sport fish populations continue to rebound.

Carolee Boyles-Sprenkel is a free-lance writer specializing in hunting, fishing and other outdoor-related topics.

RECORD FISH UPDATE

Hear that? That was the sound of the state record for the butterfly peacock bass breaking again...and again, and again.

The butterfly peacock bass was one of five freshwater species for which new records were set in the past year. The oscar's record also was broken five times, while the flathead catfish and the tiny flier records fell once. And the first certified state record for the chain pickerel was set, then broken.

At this time last year, the state record for peacock bass was 7.41 pounds. But Jesse Roberts of Miami broke that record on Dec. 14 when he pulled in a 7.65-pounder from the Hidden Lakes area off of Tamiami Canal in Dade County. Just five days later, Philip Hines of Sunrise shattered the record with a peacock weighing 8.75 pounds, more than a pound heavier than the previous record.

But Hines didn't have his catch certified until early March. So his record didn't stand long, because Jerry Gomez of Miami landed a 9.08-pound peacock bass on March 11 while fishing in Kendall Lakes in Dade County.

The Commission stocked butterfly peacock bass in south Florida canals in the mid-1980s and allowed their harvest beginning in 1989. Since then the record has been set and broken a total of eight times. You can expect the record to break several more times, too. According to Paul Shafland of the Commission's Non-native Fish Lab in Boca Raton, the fish has the potential to grow to weights of 11 or 12 pounds.

Another freshwater fish record to change hands three times since last year is the oscar. James Hillman of Hollywood caught a record oscar from Lake Okeechobee in June of 1992. His fish tipped the scales at 1.52 pounds, eclipsing the previous certified record of 1.36 pounds. Six months later, Eugene Larson of West Palm beach broke that record with a 1.66-pound oscar he caught in Palm Beach County's Everglades Conservation Area I. But the oscar record that stands today was caught long before either Hillman's or Larson's. In August 1991, Darrel McNeil of Panama City caught an oscar weighing around 2 pounds in a local pond. But someone told him they grew bigger than that in south Florida, so McNeil didn't submit it for a record. He did keep it in his freezer, however, until he could have it mounted. When he read of Larson's 1.66-pounder, McNeil took his catch to the Commission's Panama City office. When thawed, it weighed 1.79 pounds, a little less than when he caught it, but still heavy enough to be a state record.

The state record for the flathead catfish now belongs to Benjamin Miles of Cottondale. On May 24, Miles caught a flathead weighing 33.56 pounds from the Apalachicola River in Jackson County. William Lane Jr. of Whigham, Ga. set a new state record when he pulled a flier weighing 1.24 pounds from Lake Iamonia, near Tallahassee. Lane's record fish surpassed the seven-year-old record of 1.06 pounds, which also was caught in Lake Iamonia. The first certified state record for chain pickerel belonged to Larry Dean of Marianna. Dean's fish, caught in Equiloxic Creek in Liberty County May 7, weighed 5.06 pounds. Twenty days later, Adrian Sloan of Chipley caught a 5.55-pounder in the Choctawhatchee River in Washington County.

While some records are broken frequently, there still are four species of freshwater fish for which no certified record has been set: carp, skipjack herring, yellow bullhead and black bullhead. The Commission's Record Fish Program recognizes 32 freshwater species. For those catches that are big, but not record-breaking, the Commission sponsors the Big Catch Program.

– Scott Ball

FLORIDA RECORD FRESHWATER FISH PROGRAM
STATE RECORDS THROUGH MAY 1993

SPECIES	OFFICIAL WEIGHT	ANGLER, CATCH DATE & LOCATION
Largemouth bass	17.27 pounds	Billy M. O'Berry, July 6, 1986 Unnamed lake, Polk County
Largemouth bass	20.13 pounds NOT CERTIFIED	Frederick Joseph "Fritz" Friebel, May 1923 Big Fish Lake (private), Pasco County
Redeye bass	7.83 pounds	William T. Johnston, Feb. 18, 1989 Apalachicola River, Gadsden County
Spotted bass	3.75 pounds	Dow Gilmore, June 24, 1985 Apalachicola River, Gulf County
Suwannee bass	3.89 pounds	Ronnie Everett, March 2, 1985 Suwannee River, Gilchrist County

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SPECIES	OFFICIAL WEIGHT	ANGLER, CATCH DATE & LOCATION
Striped bass	38.56 pounds	Justin McAlpin, Nov. 15, 1979 Lake Seminole, Gadsden County
White bass	4.69 pounds	Richard Steven Davis, April 9, 1982 Apalachicola River, Gadsden County
Sunshine bass	16.31 pounds	Thomas R. Elder, May 9, 1985 Lake Seminole, Jackson County
Butterfly peacock bass	9.08 pounds	Jerry Gomez, March 11, 1993 Kendall Lakes, Dade County
Black crappie	3.83 pounds	Ben F. Curry Sr., Jan. 21, 1992 Lake Talquin, Gadsden County
Bluegill	2.95 pounds	John R. LeMaster, April 19, 1989 Crystal Lake, Washington County
Redbreast sunfish	2.08 pounds	Jerrel R. DeWees Jr., April 29, 1988 Suwannee River, Columbia County
Redear sunfish	4.86 pounds	Joseph (Joey) Marion Floyd, March 13, 1986 Merritt's Mill Pond, Jackson County
Spotted sunfish	0.83 pounds	Coy Dotson, May 12, 1984 Suwannee River, Columbia County
Warmouth	2.44 pounds	Tony David Dempsey, Oct. 19, 1985 Yellow River (Guess Lake), Okaloosa County
Flier	1.24 pounds	William Lane Jr., Aug. 14, 1992 Lake Iamonia, Leon County
Chain pickerel	5.55 pounds	Adrian R. Sloan, May 27, 1993 Choctawhatchee River, Washington County
Chain pickerel	8.00 pounds NOT CERTIFIED	Jimmy James, July 5, 1971 Lake Talquin, Gadsden County
Redfin pickerel	1.05 pounds	Robert E. Wilcox Jr., July 18, 1986 Jr. Walton Pond, Okaloosa County
Carp	Qualifying weight – 25 pounds	VACANT
Carp	40.56 pounds NOT CERTIFIED	Bernard Lee Rowan, May 24, 1981 Apalachicola River, Gadsden County
Oscar	1.79 pounds	Darrel McNeil, Aug. 11, 1991 Boy's Club Pond, Panama City
Skipjack herring	Qualifying weight – 2.5 pounds	VACANT
Channel catfish	44.50 pounds	Joe Purvis, May 19, 1985 Lake Bluff, Lake County
White catfish	18.88 pounds	Jim Miller, Sept. 21, 1991 Withlacoochee River, Marion County

SPECIES	OFFICIAL WEIGHT	ANGLER, CATCH DATE & LOCATION
Blue catfish	53.00 pounds	Eddie E. Flowers, Oct. 28, 1990 Escambia River, Santa Rosa County
Flathead catfish	33.56 pounds	Benjamin H. Miles, May 24, 1993 Apalachicola River, Jackson County
Brown bullhead	3.44 pounds	Arthur M. McIver, Aug. 30, 1989 Watertown Lake, Columbia County
Yellow bullhead	Qualifying weight – 2 pounds	VACANT
Black bullhead	Qualifying weight – 2 pounds	VACANT
Bowfin	19.00 pounds	Jim Brown, Nov. 5, 1984 Lake Kissimmee, Osceola County
American shad	5.19 pounds	Bud Dankert, Feb. 15, 1990 St. Johns River, Seminole County and Albert M. Judy, March 18, 1992 St. Johns River, Volusia County
Longnose gar	41.00 pounds	Evan D. Merritt, April 14, 1985 Lake Panasoffkee, Sumter County
Florida gar	7.00 pounds	Greg Rozycki, June 28, 1988 Ocklawaha River, Putnam County
Alligator gar	122.00 pounds	Michael Horton Booth, Sept. 19, 1987 Escambia River, Escambia County

Think You've Caught a Record Fish?

1. You must have a valid Florida freshwater fishing license or be exempt under provisions addressed in the Florida Freshwater Sport Fishing Guide and Regulations Summary.
2. The fish must have been taken by a legal sport fishing method in fresh waters of Florida.
3. Keep the fish alive. If that is not possible, place it in ice water. Freezing the fish will cause it to dehydrate and lose weight.
4. Weigh the fish on a public scale to determine if a possible state record exists.
5. Contact the nearest office of the Commission (see page 48) during business hours and arrange to have the fish officially weighed and measured.
6. Fill out a State Record Fish application and have it notarized. Applications are available from Commission offices and fish camps.
7. Mail completed application to: Florida Game and Fresh Water Fish Commission, Record Fish Program, 620 South Meridian Street, Tallahassee, FL 32399-1600.

How to Certify a Big Catch

1. You must have a valid Florida freshwater fishing license or be exempt under provisions addressed in the Florida Freshwater Sport Fishing Guide and Regulations Summary.
2. The fish must have been taken by a legal sport fishing method in fresh waters of Florida.
3. The fish must be weighed on a public scale and measured with a witness present.
4. Fill out a Big Catch application, available from Commission offices or fish camps.
5. Mail completed application to: Florida Game and Fresh Water Fish Commission, Big Catch Program, 620 South Meridian Street, Tallahassee, FL 32399-1600.

It's The Law

By Inspector Kyle W. Hill

Question: Do I need a registration sticker for my canoe? With so many other boats on Florida waterways, how safe is canoeing these days?

Answer: Registration is required for motor boats only. As long as your canoe is not fitted with an electric or outboard motor, no registration is required. The registration fee for canoes with propulsion motors is $3.00 a year.

The greatest hazard to safe canoeing is capsizing due to boat wakes. Try to canoe in areas with minimal boating traffic, and be alert for speeding boats. Paddle straight into wakes rather than letting them catch you broadside. Also, it's a good idea to wear brightly colored life jackets for better visibility. The new neon yellow, pink and orange models attract attention from great distances and can make a significant difference in the visibility of canoeists (and skiers).

The most important thing to remember about safe boating is to wear your life jacket. Did you know that 80 percent of Florida's boating fatalities could have been prevented if victims had worn a personal flotation device? The death toll in 1991 reached 103 – the highest in the nation. Florida has led the nation in boating fatalities for three of the past four years.

To make our waterways safer, the Florida Game and Fresh Water Fish Commission is conducting a free boating safety course called "Florida Boating Basics." It's taught by Commission Wildlife Reserve Officers, and you can enroll by contacting your nearest Commission office. The course is eight hours long and covers everything you need to know about safe boating.

There are 720,000 registered boats in Florida...so boat smart and be careful out there!

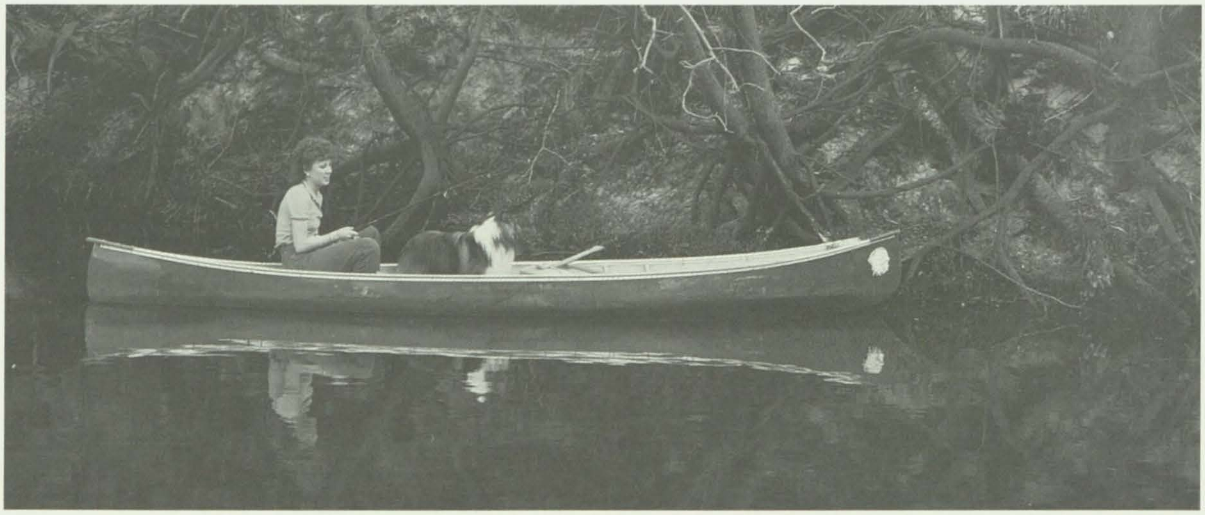
Question: I hear a lot about exotic pets these days. Can you still keep wildlife as pets in Florida?

Answer: Yes and no. There are many kinds of native and exotic (non-native) wildlife that can be kept as pets without permits. Because of their dangerous nature or protected status, some animals may not be possessed by private individuals for personal use. All nonvenomous, unprotected snakes, lizards, turtles, frogs and salamanders may be kept without a permit. The key here is knowing which species are protected. For example, it's legal to keep rat snakes as pets but not indigo snakes. There are other native reptiles that are endangered or have special possession limits.

Most warm-blooded wildlife (mammals) require permits for possession as pets. Some of those that do not require permits include ferrets, squirrels, chipmunks, prairie dogs and chinchillas.

Exotic snakes, such as boa constrictors, also may be kept as pets without a permit. Still, all exotics must be maintained securely so that they do not escape. Releasing exotics or keeping them in a negligent condition that allows them to escape is a violation of law.

If you have questions about exotic wildlife, contact the Commission's Bureau of Support Services in Tallahassee, (904) 488-6253.



JANE T. ADAMS

By Lieutenant Lynne Maddox

Choosing a Muzzleloader

Summer's here! It's a time for vacations, pool parties, picnics and long, lazy days at the beach. It's also a good time to start preparing for hunting season, since it will be here before you know it.

In some parts of the state, archery season begins Sept. 11. That's followed by muzzleloading gun season, a sport of increasing popularity in Florida.

If you're considering hunting with the old "smokepole" this season, there are several things to consider. First, which type of muzzleloader is right for you? Muzzleloaders come in rifles, shotguns and handguns, each varying as to type, brand name, caliber, etc. A reproduction muzzleloader or newly manufactured model should be your choice. We heartily recommend against firing antique guns because they can be unsafe. It's also important to preserve these historic firearms, which are in demand by collectors.

Talk with your friends and family who have a knowledge of muzzleloading equipment for their opinion about selecting a muzzleloader. Visit a local gun shop that specializes in black powder firearms and accessories, and check bookstores and libraries for books and magazines on this type of equipment. The Hunter Education officer at your regional Florida Game and Fresh Water Fish Commission office would be happy to point you in the right direction.

Another source of information is the Commission's Hunter Education course. The 16-hour program covers not only muzzleloading firearms, but 11 other subjects as well. The muzzleloading section of the course covers the history and basics of black powder, laws dealing with muzzleloading and black powder hunting in Florida, how to select a muzzleloading firearm for hunting or target shooting, necessary equipment, safety, loading and cleaning. This information is covered in lectures and demonstrations.

Hunter education courses are offered free of charge, year round. Call your regional Commission office for the date and time of the next course offered in your area.

Once you have decided on the right type of muzzleloader for your use, be sure to adhere to the manufacturer's safety recommendations. Just as with any tool, a muzzleloader can be dangerous if handled improperly.

Here are some basic rules of safety to follow:

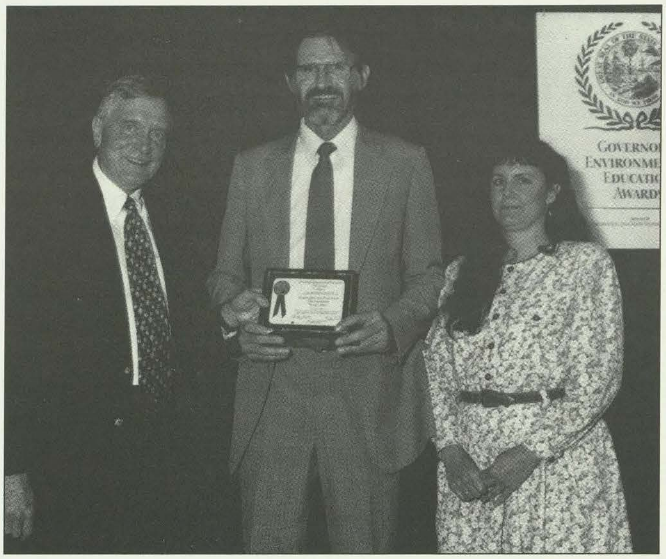
1. Never light a match, use a lighter or smoke around black powder.
2. Use only black powder or an approved substitute, such as pyrodex.
3. Do not mix powders.
4. Use a powder measure; never load directly from the can, horn or flask.
5. Be sure the bullet is firmly seated on the powder charge before you pull the trigger.
6. Treat a hangfire or misfire with extreme care, always keeping the muzzle pointed in a safe direction.
7. Store the gun, powder and caps in separate places.
8. Be sure of your target and beyond before firing.
9. Protect your eyes and ears while shooting.
10. Never drink or use any other type of drug before or during shooting.

Shooting muzzleloading firearms can be a lot of fun, but it's up to you to do your homework. Be prepared and be safe!

WILLIAM A. GREER

Conservation Update

Compiled by Scott Ball



PROJECT WILD WINS GOVERNOR'S AWARD

The Game and Fresh Water Fish Commission's Project WILD Program, an environmental education program aimed at Florida's schoolchildren, recently received the annual Governor's Environmental Education Award.

The awards are presented in five categories by the Environmental Education Foundation of Florida, Inc., a private, non-profit and non-partisan corporation established by the Executive Office of the Governor. The Commission's Project WILD, part of the nationwide Project WILD Program, won its award in the Governments category.

On hand to accept the award, presented by Gov. Lawton Chiles at Walt Disney World's Yacht and Beach Club Convention Center, were Judy Gillan, the Commission's education coordinator, and Dale Crider, nongame education specialist in the Commission's Northeast Region.

Project WILD uses group-oriented activities to teach wildlife concepts and the importance of healthy habitats.

PANTHERS MAY BREED WITH COUGARS

The Florida Panther Interagency Committee has approved development of a plan to release six female Texas cougars into south Florida to breed with male panthers. If successful, the breeding would restore the genetic health of the subspecies.

"All mountain lions (including Florida panthers) are of the same species, and their genetic characteristics are virtually identical," said Tom Logan, chief of wildlife research for the Commission and chairman of the technical subcommittee that submitted the plan.

Logan said genetic material was commonly exchanged throughout the species perhaps 150 years ago. The Florida population, however, became separated from western populations as mountain lions died out with mankind's development of the eastern United States. In-breeding among the smaller population reduced genetic variation, causing health problems to increase. That, and loss of habitat, are the primary reasons the Florida panther is now threatened with extinction.

The subcommittee will work with the U.S. Fish and Wildlife Service to prepare an environmental assessment describing details of the plan. Habitat protection remains just as important to the subspecies' recovery, Logan said.

The Florida Panther Interagency Committee includes representatives from the Game and Fresh Water Fish Commission, U.S. Fish and Wildlife Service, National Park Service and the former Department of Natural Resources (now part of the new Department of Environmental Protection).

NO PHOTO CONTEST THIS YEAR

We've been getting lots of telephone calls from people wondering if they've missed the call for entries in the FLORIDA WILDLIFE photo contest. The answer is, they haven't missed it, because there wasn't one this year.

Traditionally, we've published the winners in the September-October and November-December issues. But this year, the November-December issue will be devoted exclusively to the Commission's 50th anniversary. Therefore, we have decided to postpone the contest.

But you won't have to wait for another year to pass before entering or seeing the winners. We plan to conduct the contest earlier in 1994. Watch for details in future issues.

JEFF HAYNES IS WILDLIFE OFFICER OF THE YEAR

Jeff Haynes of Milton is the Game and Fresh Water Fish Commission's Wildlife Officer of the Year for 1993.

A three-member panel of former award winners chose the 35-year-old Haynes because of his deep sense of commitment to conservation and wildlife law enforcement.

Haynes, a seven-year veteran as a wildlife officer, is credited with developing a program with the Santa Rosa County Clerk and Tax Collector's offices to expose those who try to avoid court convictions by presenting licenses purchased after they were cited for wildlife law violations.

Col. Robert L. Edwards, director of the Commission's Division of Law Enforcement, said Haynes' "...maturity, intelligence and dedication have earned him the respect of his community and co-workers. He doesn't rush into citing an individual without considering intent, circumstances and attitude. He attempts to weigh each issue accordingly."

As a result, the committee said, his court cases always are strong and rarely contested.

Haynes is now a candidate for similar honors from the State Law Enforcement Chiefs Association and the Southeastern Law Enforcement Conference Association.

WHERE TO FISH?
PICK UP THE PHONE
DIAL 1-800-ASK-FISH

Your touch-tone phone is the key to learning what you need to know about where to go fishing.

By calling 1-800-ASK-FISH (275-3474), anglers can get information on the locations of specific bodies of water, fishing regulations, campgrounds, boat ramps and access for the physically challenged. The system, designed by Sound Response, is operational in Florida and Oregon and soon will be working in Arkansas and Kansas. The phone number will be the same in each state. Callers can enter the area code of where they want to fish and then follow the prompts to get more specific information.

Sound Response vice president Doug Bean said his company received a continuing annual $40,000 grant from the American Fishing Tackle Manufacturers Association, funded through the U.S. Fish and Wildlife Service and the Sport Fish Restoration Program. The funds come from excise taxes on the sale of fishing equipment.

OUTDOOR WRITERS HONOR FISHERIES BIOLOGIST

The Florida Outdoor Writers Association recently presented fisheries biologist Phil Chapman three awards for his accomplishments in outdoor communications and conservation.

Chapman received first place honors for Best Special Communication and Best Photo Journalism for his contribution to the Commission publication, "Recycle Your Bass."

He also received the Frank Philpott Conservation Award in recognition of his promotion of catch-and-release bass fishing and coordination of the Division of Fisheries' annual Bass Seminar. This prestigious honor is awarded only when the judges feel a nominee's accomplishments are particularly worthy.

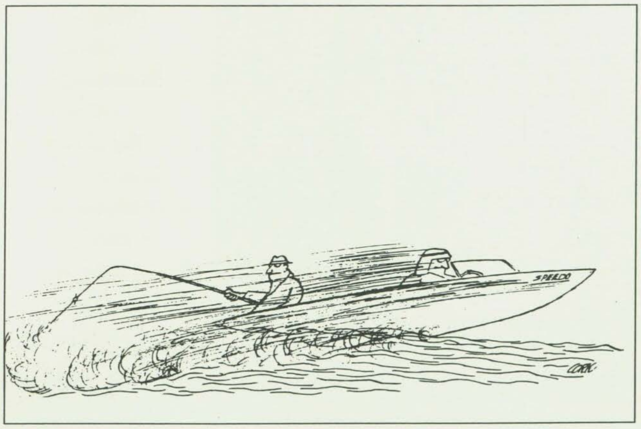
Chapman works in the Commission's South Region.

MULLET FISHERMEN TAKE NOTE

A favorite food fish of many Floridians, mullet is a saltwater species often found in freshwater rivers. So if you catch one in a river, what kind of license do you need? The Florida Legislature has eliminated some of that confusion.

A saltwater license is no longer required for any Florida resident with a valid freshwater fishing license who is fishing for mullet in fresh water. The same is true for any Florida resident fishing for a saltwater species in fresh water from land or from a structure fixed to the land.

For more information about saltwater fishing license requirements, call the Department of Environmental Protection's (formerly Department of Natural Resources) Office of Communications at (904) 488-7326.



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REGIONAL OFFICES
Florida Game & Fresh Water Fish Commission

Northwest Region
3911 Hwy. 2321
Panama City, FL 32409-1658
Telephone: (904) 265-3676

Northeast Region
Route 7, Box 440
Lake City, FL 32055-8713
Telephone: (904) 758-0525

Central Region
1239 S.W. 10th Street
Ocala, FL 34474-2797
Telephone: (904) 732-1225

South Region
3900 Drane Field Road
Lakeland, FL 33811-1299
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Floridana

Where Did "Native" Floridians Come From?

Few of our state's residents can claim to be Floridians by birth. As one of the nation's fastest growing regions, Florida has become a tourist destination and retirement mecca for many Americans and a new home for thousands of refugees. This migrational trend has not been limited to the waning decades of the 20th century, however.

From a geographic perspective, all humans migrated into the region, the first "tourists" arriving at least 12,000 years ago. These paleo-Indian hunter-gatherers found bountiful natural resources to sustain their nomadic existence. During the early period of European colonization, these first Floridians died of imported diseases and intertribal warfare. In the 18th century, other Southern tribes, chiefly the Creek, migrated into the peninsula. Today, this second wave of Native American immigrants is represented by the Seminole and Miccosukee tribes.

European exploration of Florida began less than two decades after the Columbian voyages. But, after the Hernando de Soto expedition failed to find precious metals, Spanish settlement was limited to temporary colonies until the first permanent settlement in 1565 at St. Augustine. For the next two centuries, the colony suffered plagues, Indian revolts, British attacks and royal indifference; therefore, few Europeans emigrated to Florida. When Spain ceded Florida to England in 1763, the colony had fewer than 4,000 inhabitants – whites, blacks and Indians. Very nearly all Floridians left the region, creating a population vacuum to be filled by refugees of the Revolutionary War. They were predominately American by birth and represented every English colony south of New York except New Jersey. This group of Anglo-Americans and African-Americans formed the core community that would become the principal root stock of native Floridians.

Ethnically, these latest arrivals were descendants of Europeans and Africans transplanted in the English colonies of the Old South. Five nationalities represented the bulk of these settlers: African, English, French, German and the Scottish and Scotch-Irish. With the opening of the East and West Florida colonies to American immigration in the mid-1700s, a tide of cattle drovers, yeoman farmers and planters with their slaves flowed along the Gulf-bound tributaries of the Southeast. Cheap land prices in the Florida colonies proved a powerful magnet. Cowhunter, homesteader, farmer and planter – frontiersmen all – followed in quick succession as the prime cotton lands were settled.

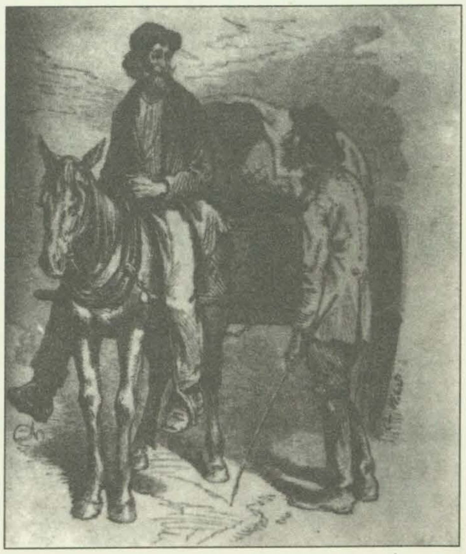
Armed with muskets and accompanied by "good dogs," these pioneers supported their families with wild game while they built rude log houses and planted corn and sweet potatoes. They distilled their small corn crops into whiskey, a more transportable and valuable commodity, and herded cattle and swine. They rounded up native cattle left behind by the Spanish *vaqueros* and fought incessantly with the resident Seminoles over ownership of cattle, horses and slaves. More prosperous settlers with slaves purchased land in the panhandle and began cultivating upland cotton as a cash crop.

But, in the pine forests of Middle Florida, a deep-woods frontier scarcely touched by ax or plow, cattlemen, loggers and turpentine farmers found sanctuary from the encroachment of family farmers and plantation owners. A typical specimen of these backwoods pioneers "carried with him a small, one-horse cart pulled by an old, gray mare, one feather bed, an oven, a frying-pan, two pewter dishes, six pewter plates, as many spoons, a rifle gun and three deer-hounds."

Richard Daniels, a visitor to the Duval County area before the Civil War, observed: "The plain people in this sparsely settled region live simply and roughly...but never wanted or went into debt..."

From the "plain folk of the Old South," as historian Frank Owsley prosaically called them, descended the Florida natives. Some bumper stickers proudly proclaim "Florida Native." The rest of us are "Alien." But, in the final analysis, all Floridians are immigrants or descendants of immigrants.

– Rob Blount



FLORIDA STATE ARCHIVES